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SESSIONAL PAPERS

VOL. LIV.—PART V.

THIRD SESSION

OF THE

FIFTEENTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO

SESSION 1922

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No. **8** Report of the Provincial Municipal Auditor for the year 1921. Presented to the Legislature, 29th May, 1922. *Printed.*

No. **9** Report of the Commissioners for Queen Victoria Niagara Falls Park for the year 1921. Presented to the Legislature, 9th June, 1922. *Printed.*

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No. **16** Report of the Department of Labour for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **17** Report of the Minister of Education for the year 1921. Presented to the Legislature, 29th May, 1922. *Printed.*

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No. **22** Report upon the Ontario Hospitals for Insane, Feeble-minded and Epileptic for the year, 1921. Presented to the Legislature, 9th June, 1922. *Printed.*

No. **23** Report on Hospitals for Idiots. *Included in No. 22.*

No. **24** Report of Hydro-Electric Railway Commission. Presented to the Legislature, 24th February, 1922. *Printed.*

No. **25** Report upon Hospitals and Charitable Institutions for the year 1921. Presented to the Legislature, 9th June, 1922. *Printed.*

No. **26** Report upon the Prisons and Reformatories of the Province for the year 1921. Presented to the Legislature, 8th June, 1922. *Printed.*

No. **27** Report upon Neglected and Dependent Children for the year 1921. Presented to the Legislature, 8th June, 1922. *Not Printed.*

No. **28** Report upon the working of the Ontario Temperance Act for the year 1921. Presented to the Legislature, 8th June, 1922. *Printed.*

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No. **32** Report of the Agricultural and Experimental Union for the year 1921. Presented to the Legislature, 15th May, 1922. *Printed.*

No. **33** Report of the Stallion Enrolment Board. *Not presented.* (*Printed.*)

No. **34** Report of the Vegetable Growers Association for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **35** Report of the Corn Growers Association. *Not presented.*

No. **36** Report of the Entomological Society for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **37** Report of the Bee-Keepers Association for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **38** Report of the Dairymen's Association for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed. See Sessional vol. for* 1923.

No. **39** Report of the Live Stock Branch of the Department of Agriculture for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **40** Report of the Housing Commission. *Not presented.*

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No. **42** Report of the Horticultural Societies for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **43** Report of the Agricultural Societies and of the Convention of the Association of Fairs and Exhibitions for the year 1921. Presented to the Legislature, 31st May, 1922. *Printed.*

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No. **52** Report of the Bureau of Archives for the year 1921. Presented to the Legislature, 20th April, 1922. *Not Printed.*

No. **53** Report of the Librarian on the state of the Library. Presented to the Legislature, 1st May, 1922. *Not Printed.*

No. **54** Report of the Provincial Auditor for the year 1920-21. Presented to the Legislature, 20th April, 1922. *Printed.*

No. **55** Report of the Workmen's Compensation Board for the year 1921. Presented to the Legislature, 1st June, 1922. *Printed.*

No. **56** Copies of Regulations and Orders-in-Council made under the authority of the Department of Education or of the Acts relating to Public Schools, Separate Schools or High Schools. Presented to the Legislature, 22nd February, 14th March, 21st March, 5th April, 12th April, 25th April, 11th May, 29th May and 9th June, 1922. *Not Printed.*

No. **57** Interim Report of the Commission respecting Sheriffs appointed to inquire, consider and report upon best mode of selecting and remunerating Sheriffs, etc., etc. Presented to the Legislature, 24th February, 1922. *Printed.*

No. **58** Return to an Order of the House of the Twenty-fourth day of February, 1922, for a Return showing—1. The total cost as shown by the records in the Department of Highways of the work on the Kingston Highway at the east end of the Village of Pickering in the summer of 1921, where the highway was lowered almost to the level of the highway before construction work commenced—showing (*a*) Cost of excavation in summer of 1921; (*b*) Cost of surfacing road after excavation of 1921; (*c*) Total cost of all work done by reason of change in level of road in summer of 1921. 2. The original cost of filling the hollow when the road was originally built. 3. The original cost of surfacing the portion which was broken up in the summer of 1921. 4. By whose orders the change in the surface of the road was made in the summer of 1921. Presented to the Legislature, 24th February, 1922. *Mr. Sinclair. Not Printed.*

No. **59** Report of the Ontario Board of Parole for the year ending 31st October, 1921. *Printed.*

No. **60** Report of the Commission under the Extra-Mural Employment of Sentenced Persons Act, for 1921. Presented to the Legislature, 28th February, 1922. *Printed.*

No. **61** Interim Report of the Public Service Commission, respecting the Toronto Police Court. Presented to the Legislature, 28th February, 1922. *Not Printed.*

No. **62** Letters and Documents in the matter of the Shevlin-Clarke Company, Limited. Presented to the Legislature, 7th March, 1922. *Not Printed.*

No. **63** An Agreement made on the Ninth day of February, one thousand nine hundred and twenty-two, between His Majesty, represented by the Honourable the Minister of Lands and Forests for the Province of Ontario, hereinafter called the Government, of the first part, and Lewis L. Alstead, Esquire, of the City of Milwaukee, in the State of Wisconsin, and George A. Seaman, Esquire, of the City of Chicago, in the State of Illinois, hereinafter called the Grantees, respecting a lease, or leases, of Water Power on Nipigon and Pic River. Presented to the Legislature, 8th March, 1922. *Not Printed.*

No. **64** Report of the Commission appointed to conduct an enquiry into the truth or falsity of charges relating to Toronto Police Court, etc. Presented to the Legislature, 14th March, 1922. *Not Printed.*

No. **65** Interim Report of the Public Service Commission respecting the Registry Office of the County of York. Presented to the Legislature, 16th March, 1922. *Printed.*

No. **66** Agreement in the matter of settlement of suits of the Shevlin-Clarke Company, Limited. Presented to the Legislature, 16th March, 1922. *Not Printed.*

No. **67** Report upon Blue Sky Legislation. Presented to the Legislature, 20th March, 1922. *Printed.*

No. **68** Statement on Distribution of Revised and Sessional Statutes. Presented to the Legislature, 21st March, 1922. *Not Printed.*

No. **69** Interim Report of the Public Service Commission, on the operation of Land Titles Act in Northern Ontario. Presented to the Legislature, 21st March, 1922. *Printed.*

No. **70** Report of the Commission to make inquiries and report upon all matters and things connected with or relative or incidental to the seizure on or about the 21st of April, 1920, of a car of whiskey at the City of Chatham, etc., etc. Presented to the Legislature, 22nd March, 1922. *Not Printed.*

No. **71** Return to an Order of the House of 15th March, 1922, That there be laid before this House a return of copies of all documents, maps, correspondence and papers dealing with the purchase, expropriation or acquiring of a certain property occupied as the Presbyterian Manse at the Village of Vernon, in the County of Carleton, at the Department of Highways, or any official thereof. Presented to the Legislature, 22nd March, 1922. *Mr. Ferguson. Not Printed.*

No. **72** Return to an Order of the House of 28th February, 1921, That there be laid before this house a Return showing:—1. All fines

and confiscations of property under The Game and Fisheries Act for each of the years 1916-17-18-19-20, imposed by game wardens, overseers or other representatives of the Department. 2. The number of such cases brought before a Magistrate of which there is any record for each year as above, and the numbers of recorded convictions. 3. The amounts for each year received by the Government and the amounts paid each year to informers. 4. Copies of instructions issued to game wardens, overseers or other representatives from time to time during the period 1912-20, dealing with the method of levying fines and directing seizure of property. Presented to the Legislature, 22nd March, 1922. *Mr. Hall. Not Printed.*

No. **73** Report of the Minimum Wage Board for the year 1921. Presented to the Legislature, 23rd March, 1922. *Printed.*

No. **74** Report of the Commission to investigate the Organization, Discipline, Administration and Efficiency of the Police Court of the City of Brantford. Presented to the Legislature, 5th April, 1922. *Not Printed.*

No. **75** Return to an Order of the House of Sixth of March, 1922, That there be laid before this House, a Return of copies of all correspondence and other documents between the Attorney-General's Department, the Ontario License Board, the Provincial Police Department, or Provincial Secretary's Department and any person or persons in Brantford having to do with the administration of justice for the City of Brantford or County of Brant since October 20th, 1919, to date. Presented to the Legislature, 7th April, 1922. *Mr. MacBride. Not Printed.*

No. **76** Return to an Order of the House of 30th April, 1921, That there be laid before the House a return of all copies of all correspondence between the Minister of Lands and Forests, the Prime Minister or any member of the Government, and E.W. Backus, or any other company, firms, or person, together with all estimates, reports, advertisements, conditions of sale, tenders, agreements, maps, documents and papers of every kind and nature relating to:—1. The Lake of the Woods pulp concession. 2. The White Dog Rapids Water Power, or any other water power in the District of Kenora. 3. The recent sale of pulp wood and timber on the English River concession. Presented to the Legislature, 10th April, 1922. *Mr. Ferguson. Not Printed.*

No. **77** Return to an Order of the House of 30th April, 1921, That there be laid before the House a Return of copies of all correspondence, papers, plans, reports and documents between the Minister of and the Federal Government and any Minister or official thereof, Highways, or any member of the Government or any official thereof,

with reference to contribution under The Canada Roads Act towards the construction of Highways in Ontario. Presented to the Legislature, 10th April, 1922. *Mr. Henry. Not Printed.*

No. **78** Return to an Order of the House of 10th March, 1922, That there be laid before this House, a return of copies of all correspondence between the Minister of Lands and Forests, the Prime Minister, the Attorney-General, or any Member of the Government and E. W. Backus or any person on his behalf or any other company, firm or person, together with all estimates, reports, advertisements, conditions of sale, tenders, agreements, maps, documents, memoranda and papers of every kind and nature relating to (1) The Lake of the Woods pulp concession; (2) The White Dog Rapids water power or any other water power in Ontario; (3) The English River Pulp concession; (4) The Keewatin Lumber Company; (5) The Keewatin Power Company. Presented to the Legislature, 18th April, 1922. *Mr. Ferguson. Not Printed.*

No. **79** Report of the Public Service Superannuation Board for the year 1921. Presented to the Legislature, 19th April, 1922. *Printed.*

No. **80** Regulations of the Provincial Board of Health for sanitary control of Lumber, Timber and Mining Camps. Presented to the Legislature, 19th April, 1922. *Printed for distribution.*

No. **81** Return to an Order of the House of 29th March, 1921, That there be laid before the House a Return showing: 1. What is the number of applications to the Board of License Commissioners, or any Commissioner, Official or Minister for the remission of fines or sentences under the O.T.A. in regard to which the member for South-East Toronto (Seat "B") acted personally or was interested professionally. 2. (*a*) What is the number of such applications favourably considered; (*b*) Rejected. 3. (*a*) What is the total sum of fines under the O.T.A. remitted in regard to which the member for South-East Toronto (Seat "B") acted personally or was interested professionally; (*b*) What is the aggregate number of fines remitted from sentences imposed under the O.T.A. in regard to which the member for South-East Toronto (Seat "B") acted personally or was interested professionally Presented to the Legislature, 19th April, 1922. *Mr. Pinard. Not Printed.*

No. **82** Copy of Commission issued to Walter Dymond Gregory, *et al* to inquire into and report upon the estimates and other matters relating to the Queenston-Chippawa Power Development in pursuance of Order-in-Council, dated 13th April, 1922, thereto annexed. Presented to the Legislature, 19th April, 1922. *Not Printed.*

No. **83** Return to an Order of the House of 29th April, 1921, That there be laid before this House, a Return of the Report of the officer, or person, who has been conducting a scale of the logs and mill-cut

at twenty-six lumber mills of Ontario throughout the sawing season of 1920, and which the Minister of Lands and Forests has reported to the House is now in his possession, together with the data on which the Report was based and all correspondence in connection therewith. Presented to the Legislature, 20th April, 1922. *Mr. McCrea. Not Printed.*

No. **84** Return to an Order of the House of 21st April, 1922, That there be laid before this House, a Return showing how many timber limits have been offered for sale since December 1st, 1919, and where situated. 2. Were they all sold by tender. 3. How long was each sale advertised. 4. The date of sale, area and price paid. 5. How many tenders were received in each case. 6. The name of the successful tenderer. Presented to the Legislature. 24th April, 1922. *Mr. McCrea. Not Printed.*

No. **85** Report and Statement of the Ontario Athletic Commission and of Auditor, for the year 1921. Presented to the Legislature, 25th April, 1922. *Not Printed.*

No. **86** Return to an Order of the House of 26th April, 1922, That there be laid before this House, a return showing the quantity of timber removed by the Keewatin Lumber Company in the District of Kenora each year during its cutting operations upon Berths S2, S3, S4, 3, 4, 6, 7, 10, 12, G9 and G10, 21 and 20. Presented to the Legislature, 28th April, 1922. *Mr. Mathieu. Not Printed.*

No. **87** Return to an Order of the House of 15th March, 1922, That there be laid before this House a Return of copies of all letters, telegrams or other correspondence during the year 1921, between any Minister of the Government or of any Member or Officer of the Ontario License Commission with any person or Corporation relating to the charges laid against Constable Lefevre, Provincial Police Force, and Constables Fleming, McKenzie and Michaud, the North Bay Police Force. Presented to the Legislature, 28th April, 1922. *Mr. Stover. Not Printed.*

No. **88** Return to an Order of the House of April 29th, 1921. That there be laid before this House, a return of copies of all Correspondence between R. T. Harding and the Honourable the Attorney-General, or any other Minister of the Crown, or any Officer of the Government since March 1st, 1921, with reference to a certain account for $500 rendered James Hourigan & Co. by the said R. T. Harding, and also copies of all letters from Crown Timber Agent Wylie since 1st June, 1920, referring to the settlement with James Hourigan & Co. for $12,600. Presented to the Legislature, 1st May, 1922. *Mr. Hill. Not Printed.*

No. **89** Report of the Mothers' Allowances Commission for the year 1921. Presented to the Legislature, 3rd May, 1922. *Printed.*

No. **90** Return to an order of the House of 12th April, 1922. That there be laid before this House, a Return of all copies of all correspondence, memoranda and reports between the Toronto and Hamilton Highway Commission and the Minister of Public Works or any member of the Government since November 15th, 1919. Presented to the Legislature, 11th May, 1922. *Mr. Henry. Not Printed.*

No. **91** Report of the Ontario Civil Service Commissioner for the year 1921. Presented to the Legislature, 12th May, 1922. *Printed.*

No. **92** Statement showing sums credited to The Highway Improvement Fund and all payments chargeable thereto as of October 31st, 1921. Presented to the Legislature, 12th May, 1922. *Not Printed.*

No. **93** Report of the Soldiers' Aid Commission of Ontario for the year 1921. Presented to the Legislature, 16th May, 1922. *Not Printed.*

No. **94** Statements showing all sums credited to the Highway Improvement Fund and all payments chargeable thereto for the fiscal years ending October 31st, 1920, and 1921, respectively. Presented to the Legislature, 23rd May, 1922. *Not Printed.*

No. **95** Return to an Order of the House of 9th February, 1921, That there be laid before this House, a Return of copies of all letters of instruction or other correspondence from the Attorney-General or any of the members of the Government, or Officials, addressed to any Police Magistrates or Crown Attorneys in the Province of Ontario; and any communications or letters in reply thereto relating to the imposition of penalties, or the trial of cases, and their disposition under The Ontario Temperance Act and amendments thereto. Presented to the Legislature, 30th May, 1922. *Mr. Dewart. Not Printed.*

No. **96** Return to an Order of the House of 25th May, 1922, that there be laid before this House, a Return showing (1) What Legislative Grants were earned in each of the years 1920 and 1921 by (*a*) Rural Public Schools, (*b*) Rural Separate Schools, (2) What was the actual amount paid to each Rural Public and Separate School for the said years. Presented to the Legislature, 6th June, 1922. *Mr. Cooke. Printed.*

No. **97** Report of the Agricultural Development Board for the year 1921. Presented to the Legislature, 8th June, 1922. *Not Printed.*

No. **98** Copies of Order-in-Council designating, pursuant to section 14 of the Hospitals and Charitable Institutions Act, Hospitals, Refuges, Orphanages and Infants' Homes to which aid may be granted. Presented to the Legislature, 8th June, 1922. *Not Printed.*

No. **99**	Return to an Order of the House of 29th April, 1921, That there be laid before this House, a Return of copies of all correspondence, reports and documents, relating to the dismissal of Magistrate Hastings, of Dunnville. Presented to the Legislature, 9th June, 1922. *Mr. Price. Not Printed.*
No. **100**	Return to an Order of the House of the 20th March, 1922, that there be laid before the House a Return of copies of all correspondence between any Minister of the Crown and any member of the Hydro-Radial Commission in connection and dealing with accounts for remuneration of services by each and every member of the Commission whether such accounts were paid in full for the amount claimed or reduced in amount. Presented to the Legislature, 9th June, 1922. *Mr. Hay. Not printed.*
No. **101**	Return to an Order of the House of the 24th February, 1922, that there be laid before the House a Return of all papers, documents, memoranda, recommendations, letters, telegrams and communications of every kind between any Municipal corporations, associations, bodies or persons and the Prime Minister or any Minister of the Government regarding the appointment or suggestion to appoint Peter Heenan, M.P.P. for Kenora, a Member of the Hydro-Electric Power Commission of Ontario. Presented to the Legislature, 9th June, 1922. *Mr. Thompson. Not Printed.*

REPORT

OF THE

Secretary and Registrar

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR
ENDING THE 31st DAY OF OCTOBER

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by Clarkson W. James, Printer to the King's Most Excellent Majesty
1922

Printed by
THE RYERSON PRESS

To His Honour Henry Cockshutt,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

The undersigned begs respectfully to present to Your Honour the report prepared with respect to the chief transactions of the Department of the Secretary and Registrar of the Province of Ontario during the year ending the 31st day of October, A.D. 1921.

Respectfully submitted,

Harry Corwin Nixon

Provincial Secretary and Registrar

Provincial Secretary's Office,
Toronto, June 6, 1922

REPORT

OF THE

SECRETARY AND REGISTRAR

OF THE PROVINCE OF ONTARIO

For the Year Ending October 31, 1921

Provincial Secretary's Office.

Toronto, June 6, 1922.

To the Honourable

HARRY CORWIN NIXON.

Secretary and Registrar of the Province of Ontario.

Sir,—I beg leave to submit the Annual Report of the Provincial Secretary's Office for the year ending October 31, 1921, showing details of the various services rendered by the office during that period.

The following table shows the fees as they were received month by month:

STATEMENT OF OFFICE FEES RECEIVED, BY MONTHS, 1921.

November	$24,143.15
December	30,193.35
January	29,456.25
February	35,160.05
March	30,240.10
April	26,992.75
May	22,166.50
June	23,665.40
July	11,411.75
August	17,052.90
September	21,754.56
October	22,442.75
Total	$294,679.90

STATEMENT OF SOURCE OF FEES RECEIVED DURING 1921.

Letters Patent, Licenses, etc	$247,859.50
Companies' Returns	32,338.50
Commissions	3,490.50
By-laws, Copies and Searches	10,991.10
Total	$294,679.51

NUMBER OF CHARTERS, LICENSES, ETC., ISSUED.

Year	Number of Instruments	Fees
1892	158	$6,780.00
1893	138	8,465.00
1894	139	7,729.00
1895	174	10,000.00
1896	154	14,335.00
1897	358	34,650.00
1898	295	23,820.00
1899	416	60,817.00
1900	438	71,179.00
1901	450	75,782.00
1902	591	95,330.00
1903	578	107,166.00
1904	673	87,177.00
1905	828	108,621.00
1906	1,045	181,998.11
1907	1,067	223,312.60
1908	924	132,252.50
1909 (ten months	828	171,695.80
1909-1910	1,110	183,780.45
1910-1911	1,211	235,662.10
1911-1912	1,288	232,079.05
1912-1913	1,305	232,364.35
1913-1914	1,120	176,270.05
1914-1915	1,080	80,744.75
1915-1916	1,265	109,276.00
1916-1917	930	133,503.03
1917-1918	1,047	102,510.75
1918-1919	1,465	214,029.05
1919-1920	1,873	380,025.33
1920-1921	1,696	294,679.51

The usual Tables and Appendices accompany this Report.

All of which is respectfully submitted.

F. V. Johns,

Assistant Provincial Secretary.

List of Companies Incorporated for the Year Ending October 31, 1921.

Name	Address	Capital.
A		
Abdelh-Aziz, Limited	St. Thomas	$100,000
Acadian Phonograph Company, Limited, The	Toronto	40,000
Ackerman, Dawson Co., Limited	Peterborough	40,000
Acme Press, Limited	Toronto	40,000
Acton Mines, Limited (No Personal Liability)	Gananoque	100,000
Adanac Agency, Limited	Toronto	40,000
Adanac Mortgage Investments, Limited	Toronto	1,000,000
Addington Telephone Company, Limited, The	Moscow	3,500
Addison Farmers' Club, Limited	Addison	10,000
Adelaide Realty Company, Limited	Toronto	200,000
Admans, Limited	Toronto	40,000
Adman and Company, Limited, S. H.	Toronto	40,000
Air-Driven Engine and Locomotive Company, Limited	Sault Ste. Marie	50,000
Alaska Silver Fox Company, Limited	Kingston	100,000
Albury Cemetery, Limited	Rednersville	10,000
Alger Press, Limited, The	Oshawa	40,000
Algonquin Securities, Limited	Toronto	500,000
All-Weld Company, Limited	Toronto	40,000
Allied Porcupine Gold Mines, Limited (No Personal Liability)	Toronto	5,000,000
Alliston Wood Products, Limited	Toronto	100,000
Almonte Gold Mining Company, Limited (No Personal Liability)	Toronto	1,000,000
Alpine Chemical Company, Limited	Toronto	40,000
American Bed Spring Company, Limited	Toronto	40,000
American Matachewan Gold Mining Company, Limited, The (No Personal Liability)	Toronto	1,000,000
Amherstburg Farmers' Co-operative, Limited	Amherstburg	40,000
Anchor Motor Service, Limited	Windsor	10,000
Anderson Miller Lumber Co., Limited	Toronto	50,000
Anglo-Canadian Securities Investment, Limited	Toronto	250,000
Animated Signs Company, Limited	Toronto	40,000
Appliances, Limited	Toronto	25,000
Arcade Brantford, Limited, The	Hamilton	500,000
Archibald Construction Company, Limited	Toronto	100,000
Ardross, Limited	Toronto	300,000
Arkona Gas and Oil Company, Limited, The	Toronto	300,000
Arlington Hotel, (Cobourg) Limited	Cobourg	200,000
Armour, Bell, Boswell & Cronyn, Limited	Toronto	50,000
Armstrong, Limited, John	Guelph	75,000
Artistic Costume Company, Limited, The	Toronto	40,000
Artists' Supply Company, Limited	Toronto	40,000
Asbestos Pulp Company, Limited, The (No Personal Liability)	Belleville	200,000
Ashgrove Telephone Company, Limited, The	Georgetown	500
Associated Agencies, Limited	Toronto	40,000
Aster Gold Mines, Limited (No Personal Liability)	Toronto	2,000,000
Atlas Drug Corporation, Limited, The	London	100,000
Atlas Securities, Limited	Toronto	40,000
Atwood Coal, Wood and Cartage Company, Limited, The	Atwood	5,000
Aunt Martha Chocolates, Limited	Toronto	135,000
Auto Rim Company, Limited, The	Toronto	250,000
Auto Service Garages, Limited	Toronto	75,000
Auto Signal Light Co., Limited	Leamington	50,000
Automobile Garage-Hamilton, Limited	Hamilton	40,000
Automotive Company, Limited	Toronto	100,000
Avenue Garments, Limited	Toronto	40,000
B		
B. & M. Shoe & Slipper Company, Limited	Toronto	40,000
Baker and Company, Limited, J. C.	Toronto	50,000
Baltic Trading Company, Limited	Toronto	1,000,000
Bancroft Marbles, Limited	Toronto	1,600,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital.
Banks Printing and Stationery Company, Limited, The	Brantford	$ 40,000
Barber & Associates, Limited, Frank	Toronto	200,000
Bartram Construction Company, Limited	Toronto	40,000
Bay of Quinte Country Club, Limited	Belleville	40,000
Beachburg-Bromley Line Telephone Company, Limited, The	Westmeath	5,000
Beamsville Arena, Limited	Beamsville	40,000
Beau Monde Tailoring Company, Limited	Toronto	50,000
Beaumaris Yacht Club Land Company, Limited, The	Beaumaris	75,000
Beaver Cheese and Butter Company, Limited, The	Campbellford	4,000
Beaver Drugs, Limited	Toronto	5,000,000
Belle Isle Creamery, Limited	Windsor	60,000
Benson-Johnson, Limited	Hamilton	500,000
Bethune & Hancock, Limited	Hamilton	40,000
Big Win Oil & Gas Company, Limited (No Personal Liability)	Toronto	500,000
Biggs Drug Company, Limited, The	Cochrane	40,000
Billy Burke Dress Company, Limited, The	Toronto	40,000
Bingham's Downtown, Limited	Toronto	200,000
Bluebird Fashion Shops, Limited	Toronto	40,000
Bluebird Sales, Limited	Toronto	40,000
Bluebird Transit, Limited	Toronto	100,000
Bonin-Dobie, Limited	Port Arthur	75,000
Bonnett Floral, Limited	Toronto	250,000
Border Cities Bond Corporation, Limited	Windsor	10,000
Border Cities Tool Company, Limited, The	Windsor	40,000
Border City Medicinal Supply Company, Limited	Windsor	100,000
Bousquet Gold Mines, Limited (No Personal Liability)	Toronto	2,000,000
Bowes' Milk Products, Limited	Toronto	500,000
Boyd's Garage, Limited	Kingston	60,000
Brampton Golf Club, Limited	Brampton	40,000
Branston, Limited Chas. A.	Toronto	100,000
Brant Co-operative Dairy Company, Limited	Brantford	50,000
Brant Creameries, Limited	Brantford	500,000
Brant Foundries, Limited	Toronto	40,000
Brantford Industrial Co-operative Society, Limited, The	Brantford	25,000
Brantford Finance Corporation, Limited	Brantford	1,000,000
Brasher Adjustable Skirt Company, Limited, The	Toronto	40,000
Braun & Bonnick, Limited	Toronto	40,000
Breakers Hotel Company, Limited, The	Grand Bend	150,000
Briars Golf and Country Club, Limited, The	Toronto	40,000
Brickley Cheese and Butter Company, Limited, The	Dartford	$5,000
Bridgeburg Realty Company, Limited, The	Bridgeburg	25,000
Bright Light Electric, Limited	Toronto	40,000
Britannia Hotel Company, Limited, The	Toronto	190,000
British Canadian Petroleum Company, Limited (No Personal Liability)	Toronto	1,000,000
British Colonial Finance Corporation, Limited	Toronto	40,000
British & Colonial Trading Company, Limited	Toronto	40,000
British Realties and Investments, Limited	Toronto	40,000
British Slipper Manufacturing Co., Limited, The	Toronto	40,000
Brittain Sand and Gravel Company, Limited	Brantford	40,000
Brockville Lumber Corporation, Limited, The	Brockville	75,000
Brooke-Jarvis Estates, Limited	Toronto	50,000
Bronte Athletic Association, Limited	Bronte	25,000
Brown & Bernard, Limited	Toronto	40,000
Brown Company, Limited, The T. H.	Toronto	40,000
Brown Fur Company, Limited, The	Toronto	40,000
Brown's Ladies Shops, Limited	Toronto	20,000
Bryant Pattern Works, Limited, E. S.	Windsor	40,000
Bubbles Beverages, Limited	Toronto	40,000
Building Supplies, Limited	Toronto	40,000
Burford United Farmers' Co-operative Company, Limited	Burford	25,000
Burgess & Company, Limited, C. H.	Toronto	500,000
Burgess Electrical Company, Limited	Toronto	40,000
Burlington Co-operative Fruit Growers, Limited	Burlington	14,000
Burnand Gold Mines, Limited (No Personal Liability	Toronto	2,500,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
C		
Cache Creek Butter & Cheese Company, Limited	Caderette	$ 10,000
Cairncroft Dairy, Limited	Brantford	40,000
Caledonia Improvement Company, Limited	Toronto	40,000
Cameron, Limited, R.	Toronto	40,000
Camp Chikopi, Limited	Windsor	10,000
Campbell Women's Wear, Limited	Toronto	100,000
Camperdown Telephone Company, Limited, The	Camperdown	1,000
Canada Church Goods Company, Limited	Toronto	50,000
Canada Colors and Chemicals, Limited	Toronto	100,000
Canada Forwarding Co., Limited, The	Port Arthur	200,000
Canada Securities & Land Corporation, Limited	Toronto	2,000,000
Canada Tanning Company, Limited	Simcoe	100,000
Canadian Automatic Barrel Machinery Company, Limited, The	Toronto	1,000,000
Canadian Automatic Carburetor Company, Limited, The	Toronto	500,000
Canadian Billiard Table and Supply Company, Limited, The	Toronto	25,000
Canadian Cap Company, Limited	Toronto	50,000
Canadian Chautauqua Institution, Limited, The	Toronto	40,000
Canadian China Products, Limited	Toronto	300,000
Canadian Commercial Schools, Limited	Hamilton	100,000
Canadian Construction Company, Limited	Toronto	40,000
Canadian Dolls, Limited	Grimsby	50,000
Canadian Dyes, Limited	Trenton	50,000
Canadian Electric Floor-Waxer and Polisher Company, Limited	Toronto	100,000
Canadian Engravers, Limited	Toronto	40,000
Canadian Finance and Trading Company, Limited	Toronto	40,000
Canadian Gas Saving Turbine Company, Limited	Toronto	50,000
Canadian Home Builders, Limited	Toronto	200,000
Canadian Ironing Machine Company, Limited	Woodstock	40,000
Canadian Non-Metallic Minerals, Limited (No Personal Liability)	Opeonogo	40,000
Canadian Oakville Company, Limited	Hamilton	100,000
Canadian Pozzolana Company, Limited	Toronto	50,000
Canadian Printing Company of Sarnia, Limited	Sarnia	40,000
Canadian Production Tool Company, Limited	Walkerville	40,000
Canadian Pulp Machinery & Engineering Company, Limited, The	Toronto	200,000
Canadian Review Company, Limited, The	Toronto	40,000
Canadian Rota-Floor Garage Company, Limited	Fort Frances	100,000
Canadian Saw Mills, Limited	Toronto	250,000
Canadian Service Stations, Limited	Toronto	125,000
Canadian Tools, Limited	Fort Erie	40,000
Canadian Top and Body Corporation, Limited	Tilbury	250,000
Canadian Vatu Drying and Wood Working Company, Limited	Sault Ste. Marie	40,000
Candy Specialties, Limited	Hamilton	40,000
Cannon, Limited, P. F.	Toronto	40,000
Canyon Mines, Limited (No Personal Liability)	Toronto	200,000
Capital Cake Cone, Limited, The	Ottawa	30,000
Capital Properties, Limited	Ottawa	100,000
Caplin Bregman Company, Limited	Toronto	40,000
Car Owners Garage Company, Limited	London	1,000,000
Caradoc Farmers' Co-operative Company, Limited	Mt. Brydges	20,000
Carbonated Products, Limited	Toronto	100,000
Cardinal Aerial Service, Limited, The	Sault Ste. Marie	100,000
Carleton Tennis Club, Limited, The	Ottawa	40,000
Carp Memorial Temple, Limited	Carp	40,000
Carrara Marble Company, Limited, The	Toronto	40,000
Casey, Limited, John J.	Ottawa	40,000
Casey Mountain Operating Syndicate, Limited, The	Toronto	100,000
Cash Company of Canada, Limited, A. W.	Toronto	50,000
Centennial Temple Association, Limited, The	Windsor	100,000
Central Canada Bond Corporation, Limited	Toronto	100,000
Central Manufacturing Company, Limited	Port Arthur	100,000
Central Ontario Oil Fields, Limited (No Personal Liability)	Peterborough	1,000,000
Central Steel Products, Limited	Toronto	40,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address.	Capital.
Centralia Farmers' Co-operative Company Limited	Centralia	$ 15,000
Centre Road Telephone Company, Limited	Twp. of Sydenham	3,600
Chadwick-Carroll Brass Company, Limited	Hamilton	40,000
Challenge Auto Accessories, Limited	Toronto	250,000
Chamberlain Coal and Oil Development Company, Limited (No Personal Liability)	Shelburne	2,000,000
Chamberlain Disolvo Company, Limited, The	Toronto	40,000
Charcoal Supply Company, Limited	Toronto	40,000
Chatham Theatre Company, Limited, The	Chatham	176,750
Chilver Land & Building Company, Limited	Walkerville	200,000
Chronicle Publishing Company of Peterborough, Limited, The	Peterborough	25,000
Cities Service Oil Company, Limited	Hamilton	5,000
City Battery Shop, Limited	Toronto	50,000
City Development Company, Limited	Toronto	150,000
Clapperton's, Limited	Toronto	250,000
Clark Fuel Company, Limited, R. W.	Windsor	40,000
Clavir and Sons, Limited, E.	Toronto	40,000
Clearview Dairy Company, Limited, The	Twp. of Sheffield P.O. Erinville	10,000
Clover Gas & Oil Company, Limited	Fort Erie	100,000
Cloverdale Farmers' Co-operative Co., Limited	Winchester	25,000
Coal Sales Co., Limited	Toronto	40,000
Cobourg Bread Company, Limited	Toronto	40,000
Cobourg City Dairy Company, Limited, The	Cobourg	60,000
Code Systems, Limited	Toronto	40,000
Colaway Motors, Limited	Toronto	150,000
Coleman Lamp Company, Limited, The	Toronto	250,000
Collett-Buell, Limited	Toronto	40,000
Colonial Motors, Limited	Windsor	1,000,000
Comfort-Kirkland Mines, Limited (No Personal Liability)	Toronto	1,500,000
Commerce and Customs Corporation, Limited	Toronto	40,000
Commercial Trading Corporation, Limited	Toronto	40,000
Commonwealth Theatres, Limited	Toronto	250,000
Community Builders, Limited, The	Toronto	500,000
Conklin Ginseng Nursery Plantations, Limited	Toronto	40,000
Consumers' Children's Coats, Limited	Toronto	40,000
Continental Coal Company, Limited, The	Toronto	40,000
Continental Finance Corporation, Limited	Hamilton	40,000
Contraflow Heaters, Limited	Toronto	100,000
Cooperage Company of Canada, Limited, The	Toronto	40,000
Co-operative Association of Fournier, Limited	Fournier	15,000
Corbett Tailoring Company, Limited	Toronto	40,000
Corey-Taylor Motor Company, Limited, The	Toronto	40,000
Corporate Finance and Security Company, Limited	Toronto	40,000
Cotton Products, Limited	Toronto	40,000
Coulson-Jarratt Telephone Company, Limited	Orillia	4,800
Cream Fried Cake Company, Limited, The	Toronto	40,000
Cressy Dairy Products Company, Limited	Twp. N. Marysburg, P.O. Picton	8,000
Cross & Sutherland Hardware Company, Limited	Hanover	50,000
Crozier Social Club, Limited, The	Fort Frances	9,000
Cunningham & Company, Limited, V. L.	Toronto	40,000
Cunningham and Hill, Limited, W. H.	Toronto	150,000
Curlers of Galt, Limited	Galt	40,000
D		
Daily Telegraph, Limited	Kitchener	150,000
Dalley Securities, Limited	Hamilton	500,000
Day Name Plates, Limited	Toronto	100,000
De Carle-Wareham, Limited	Toronto	40,000
Decker's Delicatessens, Limited	Toronto	150,000
Deco Metal Products, Limited	Toronto	350,000
Deseronto Cheese Factory, Limited	Deseronto	10,000
Delvin & Company, Limited, C. B.	Fort William	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
Diamond Oil, Limited	Glencoe	$1,000,000
Diamond Sweets, Limited	Toronto	100,000
Diamond Tobacco Co., Limited	Leamington	1,000,000
Doan Coal Company, Limited	Toronto	250,000
Domestic & Farm Appliances, Limited	Toronto	150,000
Dominion Broom & Handle Co., Limited	Mount Dennis	40,000
Dominion Cloak Company, Limited	Toronto	150,000
Dominion Combing Mills, Limited	Toronto	2,500,000
Dominion Discount Company, Limited	Toronto	1,000,000
Dominion Engineering Agency, Limited	Toronto	40,000
Dominion Grocery Company, Limited	Sault Ste. Marie	100,000
Dominion Independent Odd Fellow Company, Limited	Toronto	40,000
Dominion Insurance Agencies, Limited	Toronto	40,000
Dominion Motion Pictures, Limited, The	Toronto	600,000
Dominion Petroleum Company, Limited, The	London	100,000
Dominion Polishes Limited	Toronto	40,000
Dominion Publishing Company, Limited, The	Toronto	10,000
Dominion Reliable Machinery Co., Limited	Toronto	60,000
Dominion White Line Company, Limited	Windsor	100,000
Downes Dunlop, Limited	Toronto	200,000
Drummond Centre Telephone Company, Limited	Twp. Drummond	15,000
Drummondhill Realty Company, Limited	Niagara Fallls	103,000
Dry Milk Sales, Limited	Woodstock	100,000
Duffin, Ross and Cachion, Limited	Toronto	30,000
Duke Seed Co., Limited, J. O.	Ruthaven	60,000
Dumarts Packing Company, Limited	Kitchener	1,000,000
Dump-Trucks, Limited	Toronto	40,000
Dunn & Co., Limited, A	Toronto	250,000
Duntroon Farmers' o-operative Company, Limited, The	Duntroon	10,000
Durant Motor Company of Canada, Limited	Leaside	2,000,000
E		
Eagle Securities, Limited	Hamilton	3,000,000
Earle Electric, Limited	Toronto	50,000
Earlscourt Toy Works, Limited	Toronto	50,000
East End Garage Company of St. Catharines, Limited	St. Catharines	12,000
Echo Bowling Club, Limited	Echo Place	40,000
Eclipse Bakery, Limited	Toronto	60,000
Economic Ready-to-Wear Company, Limited	Toronto	40,000
Edgewood, Limited	Toronto	200,000
Egan Phonograph Company, Limited, The	Toronto	100,000
Electric Bakery, Limited	Fort Frances	60,000
Electric Refrigerators, Limited	Toronto	40,000
Electrical Machinery Company, Limited	Toronto	50,000
Elgin Handles, Limited	St. Thomas	60,000
Ellis-McIntyre Motors, Limited	Hamilton	150,000
Elmcourt Country Club, Limited	Windsor	40,000
Elmstead Brick & Tile Company, Limited	Windsor	200,000
Empire Publications, Limited	Toronto	750,000
Empire Shoe & Slipper Manufacturing Company, Limited, The	Toronto	40,000
Engel & Company, Limited, H. H.	Hanover	75,000
Enterprise Telephone System, Limited	Enterprise	4,260
Equator Manufacturing Company, Limited	Hamilton	40,000
Equitable Finance Corporation, Limited	Toronto	500,000
Erie Clay Products, Limited	Port Dover	80,000
Erie Hotel Company, Limited, The	Port Dover	100,000
Essex Coal Company, Limited	Windsor	30,000
Essex Truck & Tractor Company, Limited	Essex	1,000,000
Everett Manufacturing Company, Limited	Sault Ste. Marie	100,000
Excelsior Lacrosse and Athletic Association, Limited	Brampton	40,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
F		
Factory Securities, Limited	Toronto	$ 40,000
Fairbank Lumber and Coal Co., Limited	Fairbank	100,000
Farm International, Limited	FarmInternation'l P.O. Oil Springs	40,000
Farmers' Fence Company, Limited	Toronto	200,000
Farmers Mutual Millers, Limited	Chatham	4,000
Farrar & Co., Limited, Wm	Hamilton	100,000
Farrell Lumber & Fuel, Limited, W. H.	Toronto	40,000
Fashion Embroidery Company, Limited	Toronto	40,000
Fearman Company, Limited, F. W	Hamilton	1,000,000
Federal Advertising Agency, Limited	London	50,000
Federal Coal Company, Limited	Toronto	40,000
Federal Cold Storage & Warehousing Company, Limited, The	Toronto	100,000
Federal Footwear, Limited	Toronto	40,000
Feldspar Glass, Limited, (No Personal Liability)	Bowmanville	1,000,000
Ferguson Manufacturing Company, Limited	London	40,000
Ferrey Coal Company, Limited, The	Hamilton	100,000
Fidelity Bond Corporation, Limited	Toronto	50,000
Fifth Line Telephone Company, Limited, The	Bognor	1,000
Finlay Fish and Storage Company, Limited	Port Stanley	40,000
Fit-Well Shirt and Bathrobe Company, Limited, The	Toronto	40,060
Fleming Bros., Limited	Toronto	40,000
Fletcher Lumber Company, Limited, The	Windsor	100,000
Flexlume Sales System, Limited	Toronto	60,000
Floor Coverings, Limited	Toronto	40,000
Flower Shops, Limited	Toronto	40,000
Flyer Amusement Company, Limited	Toronto	50,000
Fonthill Club, Limited, The	Fonthill	10,000
Forest Farmers' Building and Trading Company, Limited	Forest	40,000
Fort Erie-Bridgeburg Lumber and Planing Mills, Limited	Bridgeburg	50,000
Fort Frances Memorial Arena Company, Limited	Fort Frances	40,000
Fort Norman Oil Company, Limited	Toronto	3,000,000
Fort Norman Securities, Limited	Toronto	40,000
Foster, Limited, Frank M	Windsor	50,000
Fournier Manufacturing Company, Limited	Windsor	50,000
Fraser Hardware Company, Limited	Galt	40,000
Frontenac Paper Box Company, Limited, The	Kingston	40,000
Frontier Record Publishing Company, Limited	Windsor	150,000
Fuller Brush Company, Limited	Hamilton	50,000
Furness-Rogers, Limited	Toronto	350,000
G		
Gallagher Remedy Company, Limited	Peterborough	40,000
Galt Arena, Limited	Galt	200,000
Galt Chemical Products, Limited	Galt	40,000
Gamble Robinson, Cobalt, Limited	Cobalt	40,000
Gananoque Golf and Country Club, Limited, The	Gananoque	40,000
Gardiner, Limited, G. & A.	Sarnia	250,000
Gem Crib and Cradle, Limited	Kitchener	40,000
General Export Company, Limited	Toronto	40,000
General Financial Corporation, Limited	Toronto	300,000
General Petroleum and Gas Company, Limited (No Personal Liability)	Toronto	500,000
General Steel & Copper, Limited	Toronto	40,000
General Stone Sales, Limited	Toronto	40,000
General Top Company, Limited, The	Toronto	100,000
General Transport Company, Limited	Toronto	40,000
General Truck and Auto Sales, Limited	Walkerville	200,000
Gentleman Rider, Limited, The	Toronto	40,000
Georgian Bay Tourist Company of Midland, Limited	Midland	100,000
Giles, Rice & Peters, Limited	Toronto	100,000
Gillespie Eden Corporation, Limited	Toronto	40,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued)

Name	Address	Capital
Gilsy Musical Corporation, Limited, The	Toronto	$ 40,000
Glen Eden Telephone Company, Limited	Twp. of Sydenham	1,600
Glenburn Farms, Limited	Toronto	250,000
Globe Code-Standard Electric Company, Limited	Hamilton	40,000
Gloucester Township Telephone Company, Limited, The	Carlsbad Springs	1,000
Goblins, Limited, The	Toronto	40,000
Gold Nugget Mining and Development Company, Limited, The (No Personal Liability)	Sudbury	500,000
Goldwyn Mines, Limited (No Personal Liability)	Toronto	2,000,000
Goodman and Rosenthal, Limited	Toronto	40,000
Gordon & Company, Limited, A. B.	North Bay	500,000
Gordon Store, Limited, The	Chatham	100,000
Gould Baird Poster Company, Limited, The	Brantford	40,000
Grafton Realty Company, Limited	Dundas	1,000,000
Graham, Sanson & Company, Limited	Toronto	40,000
Grant, Limited, D. C.	Peterborough	50,000
Grant-Chater, Limited	Toronto	40,000
Grap-o-phos Company, Limited, The	Toronto	40,000
Grattan Number Seven Telephone Association, Limited	Grattan Twp.	4,000
Great Kirkland Gold Mines, Limited (No Personal Liability)	Toronto	1,500,000
Great West Farm Machines, Limited	Milverton	300,000
Grenville Crushed Rock Company, Limited, The	Smith's Falls	300,000
Gray Farmers' Co-operative Company, Limited	Owen Sound	9,900
Grierson & Sons, Limited, Wm.	Hamilton	40,000
Grimsby Arena, Limited, The	Grimsby	50,000
Grimsby Club Realty Company, Limited, The	Grimsby	40,000
Grimsby Pioneer Laundry, Limited, The	Grimsby	50,000
Grocery Supply Service, Limited	Toronto	75,000
Growers' Cold Storage & Ice Company, Limited, The	Grimsby	100,000
Guaranty Finance Company, Limited	Guelph	100,000
Guelph Knights of Columbus Building Association, Ltd., The	Guelph	40,000
Gunn & Son, Limited, G. M.	London	20,000
H		
H. & L. Specialty Manufacturing Company, Limited, The	Toronto	40,000
Hachborn Sons Company, Limited, E. G.	Toronto	200,000
Hagersville Quarries, Limited	St. Thomas	100,000
Haggers, Limited	Sudbury	40,000
Haileybury Golf Club, Limited, The	Haileybury	40,000
Hamilton Finance Corporation, Limited	Hamilton	1,000,000
Hamilton Professional Hockey Club, Limited	Hamilton	100,000
Hamilton Properties, Limited	Hamilton	100,000
Hamilton Surveys, Limited	Hamilton	40,000
Hamilton Terminal Warehouses, Limited	Hamilton	200,000
Hancock, Limited, T. H.	Toronto	1,000,000
Hanna & Company, Limited	Wingham	100,000
Happy Home Manufacturing Company, Limited	Toronto	40,000
Hardy, Limited, Charles P.	Hamilton	15,000
Hargrave Dresses, Limited	Toronto	40,000
Harris Manufacturing Company, Limited, The W. E.	Toronto	25,000
Harvey & Company, Limited, P.	Windsor	20,000
Harwood Co-operative Creamery Company, Limited, The	Harwood	8,000
Hastings County Co-operative Wool Company, Limited, The	L'Amable	15,000
Hastings Manufacturing Company, Limited, The	Toronto	40,000
Havelock-Cordova Telephone Co., Limited	Havelock	1,500
Hellberg and Lofts, Limited	Port Arthur	40,000
Henderson Electric Company, Limited	Toronto	40,000
Henley Aquatic Association, Limited, The	St. Catharines	40,000
Herald Publishing Company of London, Limited	London	40,000
Hermo Mining Company, Limited (No Personal Liability)	Cobalt	40,000
Hi-Speed Tools, Limited	Galt	40,000
Hodgins and Fergusson, Limited	London	100,000
Hodgson Company, Limited, G. A.	Toronto	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
Holly Machinery, Limited	Port Elgin	$ 100,000
Holly's Candy Shops, Limited	Toronto	40,000
Holtyrex Gold Mines, Limited (No Personal Liability)	Toronto	3,000,000
Home Burial Company, Limited	Toronto	500,000
Home Canners of Ontario, Limited, The	Kingston	500,000
Home Chemical Company, Limited	Toronto	60,000
Homes Not Houses, Limited	Toronto	40,000
Honey Harbour Navigation Company, Limited	Midland	40,000
Hourigan Company, Limited, L. V.	Georgetown	100,000
Howell Forwarding Company, Limited	Toronto	40,000
Howell Trading Company, Limited	Toronto	40,000
Hubbard Portable Oven Company of Canada, Limited	Toronto	40,000
Hughes & Wilkins, Limited	Hamilton	10,000
Huron Canning & Evaporating Company, Limited, The	Goderich	100,000
Hyndford-Douglas Telephone Association Limited	Hyndford	1,650
I		
Ideal Cloak Company, Limited, The	Toronto	40,000
Ideal Lumber & Supply Co., Limited, The	Hamilton	200,000
Independent Electric Lamp Company, Limited	Toronto	40,000
Indian Peninsula Molybdenum Company, Limited (No Personal Liability)	Toronto	1,000,000
Industrial Products, Limited	Toronto	40,000
Ingersoll Ice Cream Cone Company, Limited	Ingersoll	100,000
Inter-Terminal Transportation, Limited	Toronto	500,000
Interlocking Cord Tire & Belt Co., Limited, The	Toronto	5,000,000
International Financial Brokers, Limited	Toronto	100,000
International Inventions, Limited	Toronto	200,000
International Oil, Gas & Development Company, Limited (No Personal Liability)	Toronto	510,000
Interprovincial Securities, Limited	London	100,000
Investors Utility Company, Limited	Toronto	150,000
Inwood Farmers' Co-operative Elevator Company, Limited	Inwood	14,900
Ireland & Company, Limited, Aubrey E.	Toronto	40,000
Iron Bridge Telephone Company, Limited, The	Iron Bridge	6,000
Irwin & Son, Limited, Thomas	Hamilton	100,000
Islet Exploration Company, Limited (No Personal Liability)	Port Arthur	250,000
J		
J. and S. Dress and Skirt Company, Limited	Toronto	40,000
Jack Frost Ice Machine Company, Limited, The	Toronto	1,000,000
Jackson-Metivier, Limited	Kingston	40,000
James, Jr., Limited, C. W.	Toronto	50,000
James Street Pharmacy, Limited, The	Sault Ste. Marie	40,000
Jarvis Arena, Limited, The	Jarvis	10,000
Jewish National Workers' Alliance Building, Limited	Toronto	40,000
Johnston-Deane, Limited	Toronto	40,000
Johnstone, Limited, B. J.	Toronto	40,000
Jones' Music Store, Limited	Hamilton	40,000
Jones Product Company, The	Toronto	40,000
Jones & Son Company, Limited, Thomas	St. Catharines	40,000
K. M. B. Syndicate, Limited (No Personal Liability)	Elk Lake	100,000
Kakery, Limited, The	Toronto	100,000
Karmellos, Limited	Paris	300,000
Karry's Recreation Club, Limited	Toronto	60,000
Kasement Skrene Dore Company, Limited	Toronto	50,000
Kawakita Company, Limited, F.	Toronto	40,000
Keele & Moor, Limited	Toronto	80,000
Keenan Brothers, Limited	Owen Sound	500,000
Keene Co-operative Shippers, Limited	Keene	14,000
Kemble and Sarawak Telephone Company, Limited	Kemble	15,000
Kent and Son, Limited, John G.	Toronto	100,000
Kerwood Farmers' Co-operative Company, Limited The	Kerwood	15,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
Kilbarry Land Company, Limited	Toronto	$ 24,000
Killakes, Limited	Fort William	60,000
Kincardine Rink Company, Limited, The	Kincardine	10,000
Kirkland Motherlode, Limited (No Personal Liability)	Toronto	2,500,000
Kitchener Finance Corporation Limited	Kitchener	1,000,000
Kitchener Motor Sales, Limited	Kitchener	10,000
Knights of Columbus Building Association of Penetanguishene, Limited	Penetanguishene	25,000
Knights of Columbus Building Association of Windsor, Limited	Windsor	150,000
Knit-Wear, Limited	Toronto	40,000
Knox Optical, Limited	Toronto	40,000
Komoka Co-operative Lighting Company, Limited, The	Komoka	2,500
Koo-Shog Summer Hotel Company, Limited	Toronto	60,000
L		
L. & C. Cloak Company, Limited, The	Toronto	40,000
La Cloche Island Company, Limited, The	Little Current	1,000,000
La Compagnie du Lac Remy, Limited	Remy Lake	30,000
La Flamme Bottling Works, Limited, The	Cochrane	40,000
Lace Goods Company, Limited	Toronto	250,000
Lacloche Rural Telephone Company, Limited, The	Massey	1,750
Ladies' Cloak & Suit Company, Limited	Toronto	40,000
Lake Charles Telephone Company, Limited	Twp. Keppel	5,360
Lake Erie Development Company, Limited	Leamington	100,000
Lakefield Rink, Limited, The	Lakefield	40,000
Lakeside Development Company, Ltd. (No Personal Liability)	Toronto	100,000
Lakeview Land Company, Limited	Toronto	40,000
Lambeth Farmers' Co-operative Company, Limited	Lambeth	40,000
Lankin & Son, Limited, E.	Toronto	40,000
Lansdowne Securities Corporation, Limited	Toronto	40,000
Larned Carter & Company, Limited	Toronto	100,000
Lauder, Limited, William	Toronto	40,000
Lavoris Chemical Company, Limited	Toronto	50,000
Leamington Amusement Co., Limited	Leamington	75,000
Leaside Transportation Company, Limited	Toronto	50,000
Lebel Lode, Limited (No Personal Liability)	Cobalt	2,000,000
Leduc and Company, Limited, J. A.	Sturgeon Falls	25,000
Leith and Annan Telephone Company, Limited, The	Leith	6,000
Leikin Limited,	Ottawa	40,000
Leith Hall Company, Limited	Leith	2,500
Levey & Levey, Limited	St. Catharines	20,000
Levin Fur Company, Limited	Toronto	100,000
Lewis Co., Limited, A. C.	Toronto	50,000
Liberty Hall Company, Limited, The	Sudbury	40,000
Lightning Change Rims, Limited	Toronto	300,000
Lightning Telephone Company, Limited, The	Grattan	1,800
Lincoln Bond Corporation, Limited	St. Catharines	40,000
Lindsay Amateur Athletic Association, Limited	Lindsay	40,000
Lindsay Foundry & Pattern Works, Limited	Lindsay	25,000
Lindsay Knights of Columbus Home Association, Limited	Lindsay	40,000
Lindsay and McCluskey, Limited	North Bay	50,000
Links O'Tay Golf & Country Club, Limited	Perth	40,000
Lion Woollen and Silks Company, Limited	Toronto	150,000
Little Blue Tea Rooms, Limited, The	Toronto	40,000
Loblaw Groceterias Co., Limited	Toronto	600,000
Lockwood Textile Company, Limited	Brantford	40,000
London Art Glass and Mirror Works, Limited, The	London	50,000
London Co-operative Stores, Limited, The	London	25,000
London Finance Corporation, Limited	London	1,000,000
London Motors, Limited	London	1,000,000
London Pure Ice Company, Limited, The	London	150,000
London Woodworkers, Limited	London	100,000
Long, Limited, William	Toronto	150,000
Long Lumber Company, Limited, The	Hamilton	400,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
Lookout Point Country Club, Limited	Welland	$ 150,000
Lucknow and Kinloss Telephone Company, Limited	Twp. of Kinloss	1,050
Lundy Products, Limited	Toronto	40,000
M		
M. & H. Construction Company, Limited, The	Toronto	50,000
Mace Construction Company, Limited	Toronto	40,000
Mack Furnace Company, Limited	Chatham	250,000
Mackenzie & Co., Limited, W. A.	Toronto	500,000
Mackenzie River Oil, Limited (No Personal Liability)	Toronto	5,000,000
MacKey's Bread, Limited	Toronto	40,000
McLean Building Reports, Limited	Toronto	200,000
McLean & Company Limited, F. A	Toronto	40,000
MacLean Publications, Limited, Hugh C.	Toronto	1,000,000
Maisonville Mining Company, Limited (No Personal Liability)	Toronto	2,500,000
Maitland Golf Club, Limited	Goderich	40,000
Majestic Gold Mines, Limited (No Personal Liability)	Toronto	1,000,000
Manchester Stores, Limited	Galt	200,000
Manley-O'Reilly Gold Mines, Limited (No Personal Liability)	Toronto	3,500,000
Mansion Gardens, Limited	Toronto	40,000
Manufacturers' Agencies, Limited	Toronto	40,000
Maple Leaf Securities, Limited, The	Thorold	50,000
Maple Leaf Stock Tonic Mills, Limited	Kitchener	300,000
Maple Leaf Telephone Company, Limited, The	Twp. of Sydenham	1,400
Mara & McCarthy, Limited	Toronto	250,000
Maritime Construction Company, Limited	Toronto	40,000
Mars Mines, Limited (No Personal Liability)	Toronto	3,000,000
Marsh Candy Company, Limited	Windsor	100,000
Marshall-Hudson, Limited	Georgetown	40,000
Martin, Limited, A.	Toronto	1,000,000
Martin Coal Company, Limited	London	30,000
Martin & Henderson, Limited	Toronto	40,000
Mastercraft Floors, Limited	Toronto	40,000
Master Spark Plug Company, Limited	Toronto	125,000
Master Tires, Limited	Toronto	1,000,000
Master-Valve Company, Limited, The	Toronto	100,000
Matheson Brick & Tile Company, Limited, The	Hamilton	40,000
Matheson Gold, Limited (No Personal Liability)	Toronto	2,000,000
Matson & Co., Limited	Aurora	40,000
Matthews & Co., Limited, R. C.	Toronto	500,000
Maxwell Company, Limited, F. R.	Toronto	40,000
Mayer-Chalmers, Limited	Sault Ste. Marie	75,000
McCraney Lumber Company, Limited, The	Hamilton	40,000
McDermid Bros., Limited	Toronto	40,000
McEachern-Greenway-Coutts, Limited	Toronto	40,000
McEnaney Gold Mines, Limited, The (No Personal Liability)	Toronto	3,000,000
McFadden, Limited, J. J.	Spragge	5,000,000
McFarlane Manufacturing Company, Limited, The	Toronto	100,000
McGeachys, Limited	Chatham	50,000
McGillivray Brothers, Limited	Toronto	40,000
McGlashan, Clarke Co., Limited	Niagara Falls	600,000
McGrory's Drug Store, Limited	Ottawa	20,000
McGuire, Limited, J. G.	Ottawa	60,000
McIlroy Belting Works of Canada, Limited, The	Kingsville	50,000
McIntosh, Limited, A. A.	North Bay	40,000
McIntosh Grain and Feed Co., Limited	North Bay	40,000
McIntyre Fax, Limited	Toronto	100,000
McIntyre, Morrison & Company, Limited	Toronto	40,000
McKenny-Vipond Sales, Limited	Toronto	40,000
McKenzie, Limited, B. R.	London	40,000
McLennan Chemical Company, Limited	Windsor	40,000
McQuay-Norris-Benfield Co., Limited	Toronto	50,000
Mead Company, Limited, The	Toronto	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
Mead Sales Corporation, Limited, W.	Toronto	$ 40,000
Mechanical Leathers, Limited	Toronto	40,000
Melancthon Telephone Company, Limited, The	Melancthon	2,400
Menzie Estates, Limited	Oakville	40,000
Merlin Farmers' Co-operative Company, Limited	Merlin	10,000
Middlesex and Dover Oil & Gas Company, Limited (No Personal Liability)	Toronto	2,000,000
Middows, Limited	Toronto	40,000
Milady's Shoppe of Chatham, Limited	Chatham	60,000
Milford Bay Hotel Company, Limited	Toronto	100,000
Millar-Scandrett, Limited	London	100,000
Miller Florists, Limited	Toronto	1,000,000
Milton Arena, Limited	Milton	40,000
Minden's Limited	Hamilton	40,000
Mines Service Corporation, Limited (No Personal Liability)	Sudbury	100,000
Misses' Dress Company, Limited, The	Toronto	40,000
Mitchel Brothers Company, Limited	Toronto	50,000
Mitchell & Co., Limited, W. G.	Toronto	50,000
Mitchell and Greenhalgh Roxborough Mills, Limited	London	50,000
Model Dairy, Limited	Sault Ste. Marie	250,000
Modern Builders, Limited	Windsor	1,000,000
Modern Cinderella Shops, Limited	Toronto	100,000
Mona Petroleum Products, Limited	Toronto	500,000
Monarch Industries, Limited	Beamsville	300,000
Moon Motors, Limited	Toronto	40,000
Moon Motors Sales, Limited	Toronto	100,000
Moore, Limited, H. B.	Toronto	200,000
Moore, Limited, S. W.	Barrie	40,000
Moore, Limited, D. Wilson	Brantford	40,000
Moore Printery, Limited, The	Hamilton	75,000
Moose River Construction and Development Company, Limited, The	Kapuskasing	100,000
Morris Bernhard Company, Canada, Limited	Toronto	40,000
Moscow Mutual Telephone Co., Limited	Moscow	1,400
Mount Albert Cemetery Company, Limited, The	Mount Albert	10,000
Mount Eagle Feldspar Company, Ltd. (No Personal Liability)	Toronto	1,000,000
Muir Porcupine Gold Mining Company, Ltd. (No Personal Liability)	Toronto	2,000,000
Mutual Builders, Limited	Toronto	40,000
Mutual Telephone Company, Limited	Orillia	800
Mutual Totalizer Company, Limited	Toronto	100,000
Muxlow & Gale Contracting Company, Limited	Windsor	40,000
N		
Nancekivell Company, Limited, F. A.	Brantford	100,000
National Cooperage Company, Limited, The	Toronto	1,000,000
National Fibre Company of Canada, Limited	Toronto	40,000
National Handles, Limited	Toronto	40,000
National Hat Frame Company, Limited	Toronto	40,000
National Pad Company, Limited	Toronto	40,000
National Review Company of Canada, Limited, The	Toronto	50,000
National Show Card School, Limited	Toronto	40,000
National Suspender Company, Limited	Toronto	40,000
National Tire and Fire Apparatus, Limited	Toronto	100,000
Ne Ville Productions, Limited	Kitchener	20,000
Nelson Press, Limited	Toronto	100,000
Nepigon Fisheries, Limited	Port Arthur	40,000
New Idea Publishing Company, Limited, The	Toronto	40,000
New Music Publishers, Limited	Toronto	100,000
Newburg Dairy Co., Limited, The	Newburgh	7,500
Niagara Dairy Products, Limited	St. Catharines	40,000
Niagara Glass Company, Limited	St. Catharines	40,000
Niagara Grand Theatres, Limited	Niagara Falls	500,000
Norfolk Co-operative, Company, Limited	Simcoe	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued).

Name	Address	Capital
North Bay Golf and Country Club, Limited, The	North Bay	$ 40,000
North Shore Realties, Limited	Gananoque	40,000
North Trail Gold Mines, Limited (No Personal Liability)	Toronto	2,000,000
Northern Advance, Limited	Barrie	40,000
Northern Farmers' Co-operative Company, Limited, The	Englehart	10,000
Northern Ginseng Company, Limited	Aylmer	500,000
Northern Hotels, Limited	Toronto	150,000
Northern Ice Cream Company of Canada, Limited	North Bay	40,000
Northern Plumbing Supply Company, Limited	Toronto	75,000
Northern Pulpwood, Lumber & Timber Company, Limited	Toronto	100,000
Northern Rice Lake Fur Company, Limited, The	Toronto	75,000
Northern Textiles, Limited	Chesley	100,000
Northrop-Strong Securities, Limited	Toronto	5,000,000
Novelty Embroidery Company, Limited	Toronto	150,000
Nu-Tec, Limited	Toronto	40,000
O		
Oakdale Co-operative Dairy Company, Limited	Twp. of Dummer	10,000
Oakville Golf Club, Limited, The	Oakville	40,000
Oakville Motor Products, Limited	Oakville	100,000
O'Connell-Rathburn Telephone Company, Limited, The	O'Connell	7,000
Oil Shares Brokerage, Limited	Toronto	100,000
O'Neil Motor Sales Company, Limited	Chatham	150,000
Ontario Bedding Company, Limited	Toronto	40,000
Ontario Bricklaying Company, Limited	Toronto	40,000
Ontario Car Advertisers, Limited	Toronto	40,000
Ontario Diamond Drilling Company, Limited	Sudbury	40,000
Ontario Finance Company, Limited, The	London	40,000
Ontario Foundation and Engineering Company, Limited, The	Toronto	50,000
Ontario Fuels, Limited	Toronto	40,000
Ontario General Bankers' Corporation, Limited	Toronto	200,000
Ontario Natural Products, Limited	Toronto	75,000
Ontario Out-of-Season Growers, Limited	Toronto	500,000
Ontario Potteries, Limited	Bowmanville	100,000
Ontario Produce Company, Limited, The	Toronto	40,000
Ontario Shoes, Limited	Kitchener	40,000
Ontario Western Petroleum, Limited	Windermere	500,000
Orange Crush Bottlers, Limited	Aylmer	2,000,000
Orford Farmers' Co-operative Company, Limited	Muirkirk	40,000
Orford Farmers' Co-operative Company, Limited, The	Muirkirk	40,000
Orillia Lawn Bowling Association, Limited	Orillia	40,000
Orillia Masonic Temple, Limited	Orillia	100,000
Oro Cement Products, Limited	Barrie	40,000
Osigian Silk Corporation of Canada, Limited, The	Toronto	200,000
Osler Realty Company, Limited	Toronto	150,000
Ottawa Stair Works, Limited	Ottawa	100,000
Ottawa Valley Flour Mills, Limited	Renfrew	50,000
Owen Sound Transportation Company, Limited, The	Owen Sound	40,000
Oxdrift Co-operative Company, Limited	Oxdrift	14,000
Oxford Clothing Company, Limited	Toronto	150,000
Oxford Farmers' Co-operative Produce Company, Limited, The	Woodstock	25,000
Oxford Farmers' Produce Company, Limited	Woodstock	40,000
Oxford Milk Products Company, Limited, The	Woodstock	150,000
Oxyweld Company of Canada, Limited, The	Toronto	40,000
P		
Paddon Company, Limited	Windsor	40,000
Page & Company, Limited, B.	Toronto	60,000
Pahquana Country Club, Limited	Toronto	100,000
Pannill Door Company, Limited	Toronto	60,000
Paramount Brantford Theatres, Limited	Toronto	650,000
Paramount Tire & Rubber Company, Limited	Toronto	250,000
Paris Arena, Limited	Paris	40,000

List of Companies Incorporated for the Year Ending October 31 1921 (Continued).

Name	Address	Capital
Paris Knitting Company, Limited	Paris	$ 150,000
Parkway Clothing Company, Limited	Toronto	40,000
Patricia Appliance Shops, Limited	Toronto	40,000
Patterson Engineering & Construction Co., Limited	Windsor	100,000
Pattison & Co., Limited, Geo	Preston	1,000,000
Pembroke & Mud Lake Telephone Co., Limited	Pembroke	840
Peninsula Hotel and Amusement Company, Limited, The	St. Catharines	175,000
Peninsular Cord Tire and Rubber Company, Limited	Hamilton	1,000,000
Pennock Company, Limited, The W. B.	London	50,000
Peoples' Investments, Limited	Toronto	60,000
Peter Pan Dress Company, Limited	Toronto	50,000
Pett Baking Company, Limited	Windsor	40,000
Pharmacie Vachon, Limited	Sturgeon Falls	15,000
Phi Sigma Tau, Limited	Toronto	40,000
Phinnemore Painting & Decorating Company, Limited	Toronto	40,000
Phoenix Briquette and Fuel Company, Limited	Toronto	300,000
Pickard, Limited, W. J.	Toronto	150,000
Piggley Wiggley Toronto, Limited	Toronto	250,000
Pine Grove Telephone Association, Limited, The	Orillia	1,200
Pine Point Park, Limited	Oshawa	33,500
Platt's, Limited	Toronto	40,000
Plews Company, Limited	Sudbury	50,000
Ponsford Construction Company, Limited	St. Thomas	400,000
Porcupine-Davidson Gold Mines, Limited (No Personal Liability)	Toronto	£1,000,000
Porcupine Peninsular Gold Mines, Limited (No Personal Liability)	Toronto	$1,000,000
Porcupine Theatres, Limited	Timmins	200,000
Port Credit Motors, Limited	Port Credit	100,000
Port Dover Rink and Development Company, Limited, The	Port Dover	40,000
Port Hope Knitting Company, Limited, The	Port Hope	40,000
Port Perry Rink Company, Limited, The	Port Perry	15,000
Porter Gold Mines, Limited (No Personal Liability)	Toronto	2,500,000
Power Furnace Company, Limited, A. H.	Toronto	40,000
Premier Securities, Limited	Toronto	40,000
Prestolock Company of Canada, Limited	St. Catharines	50,000
Preston Springs Sanitarium, Limited	Preston	600,000
Priceville Fox Company, Limited	Toronto	40,000
Primo Silver-Cobalt Mining Company, Limited (No Personal Liability)	Toronto	1,000,000
Prince George Hotel Company, Limited, The	Toronto	300,000
Print-Craft, Limited	Toronto	40,000
Printers' Guild, Limited	Toronto	40,000
Producers' Terminal Company, Limited, The	London	1,000,000
Professional Offices, Limited	Toronto	265,000
Pronto, Limited	Toronto	40,000
Provincial Contracting Company, Limited	Toronto	250,000
Provincial Motors Livery, Limited	Toronto	150,000
Prudential Financiers, Limited	Toronto	100,000
Public Benefit Clothing Company, Limited, The	Port Arthur	40,000
Pure Meat Products Company, Limited	London	20,000
Pure Moist Air Furnace Company, Limited	Ottawa	40,000
Puritan Oil Company, Limited	Woodstock	40,000
Purity Ice, Limited	Sault Ste. Marie	100,000
Purity Products, Limited	London	100,000
Q		
"Q" Valves, Limited	Toronto	40,000
Q. & R. Publishers, Limited	Toronto	20,000
Quaker Gasoline Company, Limited, The	Toronto	500,000
Quebec Paint and Varnish Company, Limited, The	Brantford	40,000
Queen City Coal and Coke Company, Limited, The	Toronto	40,000
Queen City Furniture Co., Limited	Toronto	100,000
Queen City Paper & Twine Company, Limited	Toronto	40,000
Queen-Lebel Gold Mines, Limited (No Personal Liability)	Kitchener	2,000,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued.).

Name	Address	Capital
Queen's Hotel, Toronto, Limited, The	Toronto	$ 750,000
Queens Line Telephone Co., Limited	Queen's Line	2,700
Queens Royal, Limited	Toronto	300,000
Queenston Quarries, Limited	St. David's	250,000
R		
Rainy River Canners, Limited, The	Picton	60,000
Raphael Mack Company, Limited, The	Hamilton	100,000
Rapid Electric Company, Limited	Sault Ste. Marie	40,000
Ratcliffe, Limited, E. B.	Hamilton	40,000
Real Estate Holdings, Limited	Toronto	200,000
Realty Mortgages, Limited	Toronto	1,000,000
Reamsbottom & Edwards Kirkland Company, Limited	South Porcupine	100,000
Red Wing Quarry Company, Limited	Redwater	500,000
Reflecto Light Company, Limited	Toronto	1,000,000
Regal Poultry Feed Company, Limited	Port Dover	40,000
Regent Amusement Enterprises, Espanola, Limited	Espanola	200,000
Regent Rubber Company, Limited, The	Toronto	50,000
Regent Tailors Manufacturers, Limited, The	Toronto	100,000
Regent Tailors Sales Corporation, Limited, The	Toronto	100,000
Reid and Company Lumber, Limited	Toronto	200,000
Reid Oil & Gas Company, Limited	Galt	40,000
Reitzels, Limited	Waterloo	125,000
Rendix Mines, Limited (No Personal Liability)	Toronto	1,000,000
Reo Sales Company of Hamilton, Limited	Hamilton	40,000
Resilient Air Cushion Bumper Company, Limited	Toronto	300,000
Rice Wire and Metal Goods, Limited	Toronto	50,000
Richardsons, Limited	Toronto	80,000
Ridgetown Drug Company, Limited, The	Ridgetown	6,000
Ridley Estates, Limited	Toronto	200,000
Ritchie, Limited, John	Toronto	40,000
Ritchie & Smith, Limited	Toronto	100,000
Ritz Amusements, Limited	Ottawa	10,000
Riverside Silk Mills, Limited	Galt	500,000
Robertson Knitting Company, Limited, J. M.	Toronto	40,000
Robinson Lumber Company, Limited	Fort William	100,000
Robinson Manufacturing Company, Limited, The	Toronto	40,000
Robinson-Whyte Company, Limited, The	Toronto	20,000
Roly Redy Stores, Limited	Toronto	210,000
Roofing Homes Company, Limited	Toronto	40,000
Rosenblott & Company, Limited, A. B.	Toronto	100,000
Routery Dresses, Limited	Toronto	40,000
Rowntree Estates, Limited	Toronto	205,000
Royal-Flush Oil & Gas Co., Limited (No Personal Liability)	Toronto	500,000
Ruby Operative Cobalt Mines, Limited (No Personal Liabilty)	Cobalt	1,500,000
Runnymede Lawn Bowling Club, Limited	Toronto	40,000
Rural Securities Company, Limited, The	Toronto	250,000
Russell Amusement Corporation, Limited	Russel	10,000
Russell Company, Limited, John E.	Toronto	300,000
Russell Construction Company, Limited	Toronto	500,000
Russell Drug Store, Limited	Ottawa	19,500
Ryan and Hughes, Limited	Toronto	100,000
S		
S. K. Neckwear, Limited, The	Toronto	50,000
"S" Kosher Delicatessen, Limited	Ottawa	15,000
Sagar, Limited, Joseph	Toronto	40,000
Sanderson-Barclay, Limited	Toronto	25,000
SandersonKirkland Gold Mines, Limited (No Personal Liability)	Toronto	2,500,000
Sandwich Foundry, Limited, The	Sandwich	200,000
Sanitary Carpet Cleaning and Rug Weaving Co., Limited, The	Toronto	70,000
Sarnia Finance Corporation, Limited	Sarnia	1,000,000
Sarnia Oil and Gas Company, Limited, The (No Personal Liability)	Sarnia	500,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued.).

Name	Address	Capital
Sarnia Sales, Limited	Sarnia	$ 40,000
Sarnia Townsite Company, Limited, The	Sarnia	50,000
Schuler Button Company, Limited, The	Brantford	40,000
Scotia Trading Corporation, Limited	Toronto	2,000,000
Scott, Limited, J. S.	Sudbury	50,000
Scott Coal Company, Limited	Toronto	300,000
Scottish Rite Home, of Windsor, Limited	Windsor	100,000
Scroggins Shoe Company, Limited	Galt	40,000
Seale & Company, Limited	Toronto	100,000
Second Line Drummond Telephone Company, Limited, The	Perth	4,000
Security National Company, Limited, The	Toronto	200,000
Seguin Brothers, Limited	Windsor	100,000
Select Cloak Company, Limited	Toronto	40,000
Sellers & Jones, Limited	Fort William	250,000
Service Sales Company, Limited	Toronto	40,000
Sesekinika Divide Mines, Limited (No Personal Liability)	Toronto	3,000,000
Shackelton Pulp and Lumber Company, Limited	Toronto	50,000
Shaw Oil & Development Company, Limited, A. L. (No Personal Liability)	Toronto	500,000
Sheffield Cheese Company, Limited	Tamworth	10,000
Shepherdson, Limited	New Liskeard	40,000
Shiftlock Steering Wheel Company, Limited	Toronto	75,000
Shoreacres Golf and Country Club, Limited	Toronto	150,000
Shriner's Club of Brantford, Limited	Brantford	40,000
Shuttleworth Chemical Co., Limited, The E. B.	Toronto	50,000
Siche Gas Range and Heat Company, Limited	Toronto	60,000
Silcote Telephone Company, Limited, The	Twp. of Sydenham Silcot P.O	6,300
Silverwood's Limited	London	1,000,000
Simplex Iron and Tool Company, Limited, The	Toronto	40,000
Simpson Coal Company, Limited	Toronto	40,000
Skinner, Limited, W. J.	Forest	40,000
Sloan, Dickson & Bone, Limited	Toronto	200,000
Sloan Valve Co., Limited	Toronto	40,000
Smith-Drew, Limited	Toronto	40,000
Smith Electric Company, Limited, The	Sarnia	40,000
Smith's Falls Malleable Castings, Limited	Smith's Falls	750,000
Smithville Metal Industries, Limited	Smithville	200,000
Smokeless Super-Heat, Limited	Toronto	200,000
Smyth Bros., Limited	Kitchener	400,000
Smythe, Limited, C.	Toronto	40,000
Soccer Publishing Company, Limited	Toronto	40,000
Society Ladies' Wear, Limited	Toronto	40,000
Soil Vaccine Company of Ontario, Limited	Toronto	200,000
Solidbord Company, Limited, The	Toronto	3,000,000
Solomons-Bochner Fur Company, Limited	Toronto	40,000
Soo Garage, Limited	Sault Ste. Marie	40,000
Soo Hotel Company, Limited	Sault Ste. Marie	500,000
South Keora Mines, Limited (No Personal Liability)	Toronto	3,000,000
Sparrow Lake Silver Foxes, Limited	Sparrow Lake	40,000
Specialty Bags, Limited	Toronto	500,000
Spencerville Farmers' Co-operative Company, Limited, The	Spencerville	10,000
Spey River Telephone Company, Limited	Chatsworth	600
Splitdorf Electrical Company, Limited	Toronto	15,000
Springfield Co-operative Milk Producers, Limited	Springfield	14,000
Springstead's Bakery, Limited	Hamilton	40,000
Springvale Gas and Oil Company, Limited, The	Hagersville	100,000
St. Anthony Gold Mines, Limited, (No Personal Liability)	Toronto	3,000,000
St. Catharines Bus Company, Limited	St. Catharines	40,000
St. Catharines Housing Company, Limited, The	St. Catharines	250,000
St. George Co-operative Fruit Growers, Limited	St. George	14,000
St. Lawrence Steel and Wire Company, Limited	Gananoque	500,000
St. Patrick's Professional Hockey Club, Limited, The	Toronto	40,000
St. Thomas Lawn Bowling Club, Limited, The	St. Thomas	40,000
St. Williams Co-operative Growers, Limited	St. Williams	14,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued.).

Name	Address	Capital
Standard House Furnishings, Limited	Toronto	$ 40,000
Standard Theatres, Limited	Toronto	250,000
Standfield-Macpherson Company, Limited	Toronto	40,000
Stanwood Cheese and Butter Company, Limited, The	Campbellford	3,000
Star Cloak and Suit Company, Limited, The	Toronto	40,000
Star Film Company, Limited, The	Dundas	40,000
Star Securities, Limited	Hamilton	1,000,000
Steel Shank and Specialty Company, Limited, The H. W	Preston	50,000
Stephenson Productions, Limited	Toronto	50,000
Sterling Meat Company, Limited	Hamilton	100,000
Sterling Woollens and Silk Company, Limited	Toronto	40,000
Stevens Company, Limited, Charles	Napanee	100,000
Stinson-Beale, Limited	Hamilton	40,000
Stirrett & Sons, Limited, John	Port Arthur	100,000
Stone & Company, Limited, W. E	Hamilton	75,000
Stone Clothing Manufacturing Company, Limited, The M	Toronto	100,000
Storage & Truckportation, Limited	Ottawa	20,000
Storrington Feldspar Company, Limited	Kingston	100,000
Straight Service Stations, Limited	Toronto	40,000
Street and Sons, Limited, George	Orillia	40,000
Sturgeon Co., Limited, R. G	Peterborough	100,000
Sunny Valley Telephone Company, Limited	Chatsworth	600
Sunnyside Amusement Company, Limited, The	Toronto	750,000
Sunnyside Pavilion, Limited	Toronto	100,000
Superior Engravers, Limited, The	Hamilton	40,000
Superior Homes, Limited	Toronto	200,000
Superior Wrench & Tool Co., Limited	Toronto	40,000
Sutherland & Company, Limited, F. C	Toronto	500,000
Sutherland Company, Limited, W. M	Toronto	100,000
Sydenham-St. Vincent Oil & Gas Company, Limited (No Personal Liability)	Owen Sound	40,000
Symons Construction Co., Limited	Toronto	300,000
T.		
Tailor-Craft, Limited	Toronto	100,000
Tait Storage Battery Company, Limited, The	St. Catharines	100,000
Tanco of Canada, Limited	Windsor	40,000
Taplin Shoes of Peterborough, Limited	Peterborough	40,000
Tavistock Cheese and Butter Company, Limited, The	Tavistock	10,000
Taylor Bros. Cutlery Company, Limited	Hamilton	75,000
Taylor-Campbell Electric Company, Limited,	London	250,000
Technical Services, Limited	Toronto	600,000
Textile Trimmings, Limited	Toronto	40,000
Thermo Electric, Limited	Brantford	60,000
Thermoflash, Limited	Toronto	1,000,000
Thexton Machine Works, Limited	Toronto	50,000
Thomas & Son, Limited, G. H	Galt	40,000
Thompson Bros., Launderers, Limited	Kingston	40,000
Thomsons (Textiles) Limited	Whitby	500,000
Thorndale Co-operative Dairy Company, Limited	Thorndale	40,000
Thorold Motors, Limited	Thorold	500,000
Thrift Dry Goods Shops, Limited	Toronto	50,000
Thunder Bay Dairy Products, Limited	Fort William	40,000
Thunder Bay Lumber Company, Limited	Port Arthur	100,000
Tilley & Son, Limited, Chas	Toronto	200,000
Till's Garage and Livery, Limited	Toronto	40,000
Tilt-Lok Steering Wheels, Limited	Toronto	200,000
Times Press of Toronto, Limited, The	Toronto	40,000
Timiskaming Pulp and Paper Company, Limited	Toronto	500,000
Tisdall & Son, Limited	Toronto	100,000
Titterington Company, Limited	St. Catharines	100,000
Tomlinson and Harold, Limited	Brantford	40,000
Tools & Stampings, Limited	Toronto	50,000
Toronto Asphalt Roofing Manufacturing Company, Limited	Toronto	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued

Name	Address	Capital
Toronto Auto Accessories, Limited	Toronto	$ 50,000
Toronto Clothing Manufacturing Company, Limited	Toronto	300,000
Toronto Finance Corporation, Limited	Toronto	2,000,000
Toronto Furnace Company, Limited	Toronto	200,000
Toronto-Grey Gas and Oil Company, Limited (No Personal Liability)	Toronto	600,000
Toronto Oil Company, Limited (No Personal Liability)	Toronto	1,000,000
Toronto Paper and Twine, Limited	Toronto	40,000
Toronto Packing Company, Limited	Toronto	100,000
Toronto Saw and Tool Company, Limited	Toronto	400,000
Toronto Specialty Manufacturing Company, Limited	Bradford	200,000
Toronto Timber and Cord Wood Company, Limited	Toronto	40,000
Toronto Vinegar Works, Limited	Toronto	300,000
Toronto Winter Club, Limited	Toronto	250,000
Traders Importing Company, Limited	Toronto	40,000
Traders Realty, Limited	Hamilton	40,000
Transcontinental Development Company, Limited	Toronto	250,000
Transportation Service, Limited	Toronto	40,000
Trees Development Company, Limited	Toronto	100,000
Triplex Gold Mines, Limited (No Personal Liability)	Toronto	5,000,000
Trudel & McAdam, Limited	Ottawa	40,000
Turnbull Mines of Porcupine, Limited, (No Personal Liability)	Toronto	2,000,000
Turner Company, Limited, The Byron H.	Little Current	40,000
Turn-O-Stop Manufacturing Corporation Limited	Toronto	1,000,000
Tuscany Children's Hat Company, Limited	Toronto	40,000
Twin-City Arena Company, Limited, The	Kitchener	250,000
Two-in-One Gold Mines, Limited (No Personal Liability)	Toronto	5,000,000
U.		
U. S. Light & Heat, Limited	Niagara Falls	40,000
Uhthoff Telephone Company, Limited	Orillia	9,600
Uniform & Equipment Co., Limited	Toronto	50,000
Union Star Cheese Factory, Limited	Northcote	5,000
United Advertising Agency, Limited	Toronto	10,000
United Film Libraries, Limited	Toronto	150,000
United Finance Corporation, Limited	Windsor	150,000
United Fuel & Dock Company, Limited	Toronto	250,000
United Growers' Packages, Limited	Niagara-on-the-Lake	75,000
United Service Company, Limited	Toronto	25,000
Unity Club, Limited, The	Preston	25,000
Universal Casket Company, Limited, The	Dunnville	2,000,000
Universal Electric, Limited	Toronto	80,000
Universal Stampings, Limited	Hamilton	50,000
Upper Canada Estates, Limited	Toronto	24,000
Urban Improvements, Limited	Toronto	40,000
Utility Cloth Company, Limited	Toronto	40,000
Uxbridge Arena Company, Limited	Uxbridge	10,000
Uxbridge Milling Company, Limited, The	Uxbridge	40,000
Uxbridge Ready Roofing and Tinware Manufacturing Company, Limited	Uxbridge	50,000
V.		
V. D. L. Rubber Corporation, Limited, The	Toronto	1,000,000
Van Allen Flax Threshers, Limited	Toronto	500,000
Vandecar Co-operative Cheese and Butter Company, Limited	Twp. of East Oxford	5,000
Vankleek Hill Curling Rink Company, Limited, The	Vankleek Hill	5,000
Verona & Frontenac Telephone Company, Limited, The	Verona	7,875
Victorian Case Company, Limited	Toronto	40,000
Victory Automobile Accessories, Limited	Toronto	250,000
Vimy Hospital, Limited, The	Ottawa	50,000
Violet Hill Telephone Company, Limited, The	Shelburne	1,200
Vogue Fur Shop, Limited	Toronto	40,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Continued.)

Name	Address	Capital
W		
Wade, Limited, A. E.	Sault Ste. Marie	$ 150,000
Wahl Company, Limited, The	Toronto	250,000
Walker Brothers, Limited	Owen Sound	100,000
Waltham Motors Corporation of Canada, Limited	Toronto	1,000,000
Walton Farmers' Co-operative Co., Limited, The	Walton	10,000
Ward & Sons, Limited, William	London	300,000
Warren Transportation Company, Limited	Toronto	200,000
Waterford Co-operative Growers, Limited	Waterford	14,000
Waterford Rink Company, Limited, The	Waterford	20,000
Watson, Galt, Limited, R. Leo	Galt	30,000
Watson, London, Limited, R. Leo	London	50,000
Waupoos Rural Cheese and Butter Company, Limited, The	Waupoos	8,000
Weisbrod Fur Company, Limited, The	Toronto	75,000
Wentworth Oil and Gas Company, Limited	Hamilton	100,000
Wentworth Securities, Limited	Hamilton	500,000
West-Beaumont Gold Mines, Limited, (No Personal Liability)	Toronto	2,000,000
West End Laundry and French Cleaners, Limited	Toronto	100,000
West Lorne Turf and Athletic Club, Limited	West Lorne	10,000
West Toronto Builders, Limited	Toronto	50,000
West Window Regulator Company, Limited	Toronto	100,000
Western Cut-Rate Millinery Company, Limited	Toronto	100,000
Western Farm Products, Limited	Toronto	40,000
Western Fish and Produce Company, Limited, The	London	40,000
Western Oil Company, Limited, The	St. Catharines	500,000
Westmeath Seventh Line Telephone Co., Limited	Beachburg	1,200
Westminster Realty Company, Limited	Toronto	650,000
Westner Fuel Oil & Water Gas Producers, Limited	Toronto	300,000
Weymouth Gardens, Limited	Toronto	100,000
Wheeler & Bain, Limited	Toronto	100,000
Whicher Lumber Company, Limited, The	Colpoys Bay	50,000
Whitby Financial Corporation, Limited	Whitby	10,000
Whyte Paper Company, Limited	Toronto	60,000
Wiarton Lumber Company, Limited	Wiarton	200,000
Wickett Company, Limited, H. A.	Toronto	40,000
Wiesberg's Limited	Toronto	40,000
Wilke Company, Limited, F. L.	Toronto	100,000
Wilkinson Limited, W. W.	Galt	300,000
Williams Company, Limited, C. B.	Toronto	40,000
Willowdale Recreation Club, Limited	Willowdale	40,000
Wilton Dairy Company, Limited, The	Wilton	10,000
Winchester Dye Company, Limited	New Toronto	100,000
Windsor Bond and Investments, Limited	Windsor	101,000
Windsor Clay Products Company, Limited	Windsor	250,000
Windsor Essex Rolling Stock, Limited	Toronto	40,000
Windsor Lumber Co., Limited	Windsor	100,000
Windsor Machine & Tool Works, Limited	Windsor	500,000
Windsor Orange Hall Company, Limited, The	Windsor	40,000
Windsor Sausage Company, Limited	Windsor	60,000
Windsor Telegram Publishing Company, Limited	Windsor	300,000
Wingham Creamery Co., The	Wingham	60,000
Winter Gardens Association of London, Limited, The	London	25,000
Winters Garments, Limited	Toronto	40,000
Woodbridge Farmers' Co-operative Company, Limited	Woodbridge	10,000
Woodford Telephone Company, Limited	Twp. of Sydenham	5,000
Woodland Estates, Limited	Toronto	100,000
Woodlands Orchards, Limited, The	Toronto	80,000
Woodstock Masonic Temple, Limited, The	Woodstock	40,000
Woodworker Publishing Company, Limited	Toronto	100,000
Woolevers, Limited	Niagara Falls	40,000
Woolley Smith Company, Limited	Toronto	150,000
Woolings and Company, Limited, T. S.	Englehart	200,000
Wray's Jewelry, Limited	London	100,000

List of Companies Incorporated for the Year Ending October 31, 1921 (Concluded).

Name	Address	Capital
Wright Bros., Limited	Toronto	$ 40,000
Wright Dry Goods, Limited	Gananoque	40,000
Wright & McFadden, Limited	Toronto	40,000
Y		
Yarker Rural Telephone Co., Limited	Yarker	5,000
Ye Paris Printe Shoppe, Limited	Paris	40,000
Yellow Cab Company of Hamilton, Limited	Hamilton	40,000
York Freehold Properties, Limited	Toronto	40,000
York Shoe Company, Limited	Galt	200,000
Yorkshire Worsted Company, Limited, The	Toronto	150,000
Z		
Zion and Wolseley Telephone Company, Limited	Twp. of Keppel P. O. Wiarton	1,800

List of Companies whose Capital was Increased.

Name of Company	From	To	Date
A			
Alabastine Company, Paris, Limited, The	$ 200,000	$ 500,000	Jan. 7, 1921.
Andrew Malcolm Furniture Company, Limited	100,000	300,000	Dec. 31, 1920.
Appliances, Limited	25,000	200,000	Feb. 18, 1921.
Ardtrea Telephone Company, Limited, The	1,800	5,760	Aug. 5, 1921.
Asbestos Pulp Company, Limited, The (No Personal Liability)	200,000	500,000	Mar. 29, 1921.
Automobile Service Syndicate, Limited	50,000	100,000	Sept. 28, 1921.
B			
Battle Creek Toasted Corn Flake Company, Limited	250,000	500,000	Jan. 19, 1921.
Beamish and Smith, Limited	100,000	200,000	April 29, 1921.
Beauchamp & How, Limited	10,000	40,000	Feb. 19, 1921.
Blachford Shoe Manufacturing Company, Limited	40,000	300,000	June 24, 1921.
Border Cities Hotel Company, Limited, The	1,500,000	2,500,000	May 31, 1921.
Brantford Oven and Rack Company, Limited, The	50,000	200,000	Mar. 10, 1921.
Breithaupt Leather Company, Limited, The	500,000	2,000,000	Dec. 24, 1920.
Brown's Bread, Limited	150,000	500,000	Jan. 27, 1921.
Burroughs Furniture Company, Limited, The F. C.	100,000	350,000	Dec. 29, 1920.
C			
Caledonia Milling Company, Limited, The	25,000	75,000	Mar. 12, 1921
Canadian Hoffman Machinery Company, Limited	40,000	150,000	Dec. 23, 1920.
Channell, Limited	150,000	200,000	Dec. 31, 1920
Cockshutt Securities, Limited	75,000	150,000	Dec. 29, 1920.
Coleman Lamp Company, Limited, The	250,000	400,000	June 27, 1921.
Contact Bay Mines, Limited (No Personal Liability)	350,000	1,000,000	Mar. 9, 1921.
Cumberland Land Company, Limited	20,000	200,000	Dec. 21, 1920.
D			
Disappearing Propeller Boat Company, Limited	100,000	300,000	June 15, 1921.
Dominion Button Manufacturers, Limited	100,000	1,000,000	Nov. 1, 1920.
Dominion Macaroni Co., Limited, The	100,000	200,000	Apr. 27, 1921.
Dufferin Construction Company, Limited	50,000	100,000	May 12, 1921.
Durant Motors of Canada, Limited	2,000,000	3,000,000	Oct. 28. 1921.
E			
Earl Mansions (First) Limited	80,000	140,000	Aug. 8, 1921.
Eclipse Baking Company, Limited	40,000	200,000	Dec. 15, 1920.
Enterprise Telephone System, Limited	4,260	5,700	July 5, 1921.
Ernest Bros. Company, Limited	40,000	100,000	Apr. 30. 1921.
F			
Fisher Body Company of Canada, Limited	150,000	2,000,000	Dec. 20, 1920.
Fitzsimons Company, Limited, The Robert	50,000	150,000	May 14, 1921.
Flavelles, Limited	100,000	300,000	Jan. 21, 1921.
Ford Company, Limited, The T. S.	40,000	60,000	Feb. 14, 1921.
G			
Genesse Mining Company, Limited (No Personal Liability)	1,000,000	2,000,000	Apr. 8, 1921.
Goodfish Gold Mines, Limited, The (No Personal Liability)	1,000,000	2,000,000	July 22, 1921.
Grand & Toy, Limited	150,000	500,000	Dec. 28, 1920.
Green & Company, Limited, John C.	125,000	500,000	Dec. 29, 1920.
Groceries, Limited	40,000	150,000	Nov. 10, 1920
Gull River Lumber Company, Limited	100,000	300,000	Jan. 31, 1921

List of Companies whose Capital was Increased (Continued).

Name of Company	From	To	Date
H			
H. E. Furniture Co., Limited, The	$ 40,000	$ 150,000	Mar. 18, 1921
Hamilton Carhardt Cotton Mills, Limited	100,000	500,000	Nov. 10, 1920.
Hinde and Dauch Paper Company of Canada, Limited, The	250,000	625,000	Dec. 21, 1920
Hobbs Manufacturing Company, Limited, The	50,000	1,000,000	Dec. 30, 1920.
Howell Lithographic Company, Limited, The	49,000	500,000	Dec 28, 1920.
Hunton-Kirkland Gold Mines, Ltd. (No Personal Liability)	1,500,000	2,500,000	Nov. 10, 1920.
I			
Independent Cordage Company of Ontario, Limited	150,000	500,000	Dec. 30, 1920.
Insulation and Moulded Products, Limited	80,000	130,000	Jun. 7, 1921.
Interior Hardwood Company, Limited, The	40,000	300,000	Feb. 4, 1921.
J			
Jewel Gold & Copper Mining Company, Limited, The (No Personal Liability)	300,000	1,000,000	Apr. 4, 1921.
K			
Kent-McClain, Limited	100,000	300,000	July 14, 1921.
Kirk Gold Mines, Company, Limited (No Personal Liability)	2,000,000	4,500,000	Aug. 8, 1921
L			
Lackie, Limited, John	40,000	100,000	Jan. 25, 1921.
London Bond Corporation, Limited	100,000	500,000	May 17, 1921.
Lytle Company, Limited, T. A.	100,000	200,000	May 4, 1921.
M			
Macey Sign Company, Limited	40,000	100,000	Oct. 10, 1921.
Major & J. Soubliere, Limited, L. H.	100,000	300,000	Oct. 26, 1921.
McDonald & Willson, Limited	150,000	250,000	Dec. 28, 1920.
Municipal Bankers Corporation, Limited	200,000	1,000,000	June 21, 1921.
Murdoch & Co., Ltd., Grover C.	50,000	100,000	Oct. 25, 1921.
Mathews Steamship Company, Limited	250,000	2,000,000	Dec. 24, 1920.
Midfield Natural Gas Company, Limited	40,000	250,000	Apr. 26, 1921.
Mutual Agency, Limited	75,000	150,000	Apr. 1, 1921.
N			
Norton Fisher & Company, Limited	40,000	100,000	Oct. 26, 1921
Nicholson Lumber Company, Limited, The	25,000	100,000	Mar. 22, 1921
O			
Omemee Tanning Company, Limited, The	40,000	200,000	Mar. 10, 1921.
Ontario Paper Company, Limited, The	3,500,000	5,500,000	Dec. 6, 1920.
Orme, Limited	200,000	300,000	Dec. 23, 1920.
P			
Pembroke Shook Mills, Limited	100,000	500,000	Dec. 31, 1920.
Porcupine Miracle Mining Company, Limited, The (No Personal Liability)	1,000,000	2,000,000	Mar. 7, 1921.
Premier Tire and Rubber Company, Limited	300,000	500,000	Jan. 17, 1921.
Producers Creamery Company, Limited, The	5,000	25,000	Feb. 26, 1921.
Provident Land Company, Limited, The	40,000	100,000	Dec. 28, 1920.

List of Companies whose Capital was Increased (Concluded).

Name of Company	From	To	Date.
R			
Reid Company, Limited, A. T.	$ 150,000	$ 250,000	Aug. 29, 1921.
Rennie Company, Limited, William	150,000	500,000	Jan. 29, 1921.
Roy Company, Limited	20,000	100,000	Apr. 4, 1921.
Rumney Settlement Telephone Company, Limited	840	2,300	Feb. 25, 1921.
S			
Sapon Soaps of Canada, Limited	100,000	200,000	Nov. 27, 1920.
Silverado Mining Company, Limited (No Personal Liability)	1,000,000	3,000,000	Mar. 1, 1921.
Silver Bullion Mines, Limited., (No Personal Liability)	1,500,000	2,000,000	May 9, 1921.
Silverthorn Land Company, Limited	40,000	100,000	Dec. 23, 1920.
Spectator Printing Company, Limited, The	20,000	500,000	Dec. 28, 1920.
Standard Fuel Company of Toronto, Limited, The	50,000	250,000	Mar. 7, 1921.
Sturgis Baby Carriage Company, Limited	40,000	250,000	Mar. 14, 1921.
Suydam Realty Co., Limited	150,000	400,000	Dec. 20, 1920.
Sylvanite Gold Mines, Ltd., (No Personal Liability)	2,000,000	3,000,000	July 20, 1921.
T			
Temple-Pattison Company, Limited, The	200,000	300,000	Dec. 31, 1920.
Terminal Publishing Company, Limited	50,000	150,000	Mar. 29, 1921.
Times-Journal of Fort William, Limited	40,000	200,000	Jan. 8, 1921.
Timiskaming Pulp and Paper Company, Limited	500,000	1,000,000	Apr. 13, 1921.
Turnbull Company of Galt, Limited, The C.	50,000	2,000,000	Feb. 7, 1921.
U			
United Cigar Stores, Limited	25,000	100,000	Mar. 24, 1921.
United Farmers' Co-operative, Limited, The	1,000,000	1,250,000	Jan. 4, 1921.
Universal Battery Company, Limited	40,000	50,000	May 23, 1921.
Universal Motors-Hamilton, Limited	30,000	70,000	May 20, 1921.
Wagstaffe, Limited	40,000	1,000,000	Dec. 29, 1920.
Walker, Limited, G. Hawley	40,000	300,000	Apr. 15, 1921.
Windsor Asbestos Company, Limited, (No Personal Liability)	600,000	2,000,000	Mar. 1, 1921.
Wood-Turning Products, Limited	40,000	200,000	Jan. 3, 1921.
Wright-Hargreaves Mines, Limited, (No Personal Liability)	2,500,000	2,750,000	Apr. 9, 1921.

List of Corporations whose Powers were Extended.

Name.	Date
A	
Allens Toronto Theatres, Limited, (Varying terms of preference shares)	Apr. 30, 1921.
Ardtrea Telephone Company, Limited, The (Redividing capital)	Aug. 5, 1921.
Associated Producers, Limited (Authorizing the Company to keep books out of the Province)	Apr. 21, 1921.
Automobile Service Syndicate, Limited (Re-dividing capital stock and increasing Capital)	Sep. 28, 1921.
B	
Bishop Strachan School, The (Increasing number of members of Council)	Feb. 22, 1921.
Bowes' Milk Products, Limited (Varying terms of preference share clauses)	Dec. 8, 1920.
Brantford Finance Corporation, Limited (Authorizing the Company to pay a commission)	Sep. 29, 1921.
Brantford Oven and Rack Company, Limited, The (Extending powers of the Company)	Mar. 10, 1921.
Brock Motors, Limited (Re-dividing capital of the Company)	Apr. 13, 1921.
Brunner Mond Canada, Limited (Extending powers of the Company)	Sep. 27, 1920.
Burroughes Furniture Company, Limited, The F. C. (Varying terms and conditions of preference shares)	Dec. 29, 1920.
C	
Canada Crushed Stone Corporation, Limited (Varying terms of issue of preference shares)	Oct. 22, 1921.
Canadian Edison Phonographs, Limited (Authorizing the Company to keep books out of the Province)	Apr. 30, 1921.
Canadian Rockland Tire and Rubber Corporations, Limited, The (Amending preference shares clauses and converting unissued common shares into preference shares)	Nov. 26, 1920.
Channell, Limited (Converting common shares into preference shares)	Dec. 31, 1920.
Cobourg City Dairy Company, Limited, The (Converting unissued common shares into preference shares. Re-dividing common shares; equalizing voting powers of shareholders)	Dec. 7, 1920.
D	
Durant Motors of Canada, Limited (Authorizing the Company to pay Commission)	Sept. 26, 1921.
Durant Motors of Canada, Limited (Amending Supplementary Letters Patent of Company dated Sept. 26, 1921, and authorizing Company to hold meetings outside of the Province)	Oct. 28, 1921.
E	
Erie Investments, Limited (Converting the Company into a public company, re-dividing capital and authorizing company to pay a commission)	Aug. 15, 1921.
Essex Development Company, Limited (Converting common shares into preference shares; authorizing the company to pay a commission)	July 4, 1921
F	
Fowlers' Canadian Company, Limited (Extending the power of the Company)	Dec. 13, 1920.
Fuller Brush Company, Limited (Extending the powers of the Company)	May 17, 1921.
G	
Gibson Gold Mines, Limited (No Personal Liability) (Authorizing the Company to keep its books outside of Ontario)	Dec. 1, 1920.
Glover Gas & Oil Company, Limited (Authorizing the Company to pay a Commission)	March 14, 1921.
H	
Hamilton Carhartt Cotton Mills, Limited (Authorizing the Company to hold meetings out of Ontario)	Nov. 10, 1920.

List of Corporations whose Powers were Extended (Continued).

Name	Date
I	
Indian Peninsula Molybdenum Company, Limited (No Personal Liability) (Authorizing the Company to keep its books outside of Ontario)	Feb. 8, 1921.
Islet Exploration Company, Limited (No Personal Liability) (Authorizing the Company to keep its books outside of Ontario)	March 3, 1921.
K	
Karry's Recreation Club, Limited, (Re-dividing existing 120 shares of capital stock)	Aug. 9, 1921.
King Edward Construction Company, Limited, The, (Extending powers of the Company; confirming by-law number fourteen; and amending by-law number eleven of the Company	Dec. 8, 1920.
M	
Macey Sign Company, Limited, The (Re-dividing capital stock)	Oct. 10, 1921.
Macfarlane Engineering, Limited, G. W. (Converting the Company into a public company)	Jan. 10, 1921.
Mackenzie River Oil, Limited (No Personal Liability) (Re-dividing stock of Company)	Dec. 9, 1920.
Mackinley and Northwood, Limited, (Creating 300 issued shares of stock into preference shares)	Sept. 26, 1921.
Midfield Natural Gas Company, Limited (Authorizing the Company to pay commissions)	Apr. 26, 1921.
Moores, Limited (Converting 750 unissued shares and 750 issued shares into preference shares)	July 9, 1921.
Mount Eagle Feldspar Company, Limited (Authorizing the Company to keep its books outside of the Province of Ontario)	June 16, 1921.
Municipal Bankers' Corporation, Limited, (Converting preference shares into common shares)	June 21, 1921.
P	
Peninsular Cord Tire and Rubber Company, Limited (Converting common shares into preference shares)	Oct. 22, 1921.
Pittaway Jarvis, Limited, (Converting unissued common shares into preference shares)	Mar. 16, 1921.
S	
Scarborough Company of Canada, Limited, The, (Converting common shares into preference shares)	Jan. 15, 1921.
Silverado Mining Company, Limited, (No Personal Liability) (Increasing number of directors)	Mar. 1, 1921.
S. K. Neckwear, Limited, The, (Authorizing the Company to pay a commission)	July 12, 1921.
Spectator Printing Company, Limited (Extending the powers of the Company)	Dec. 28, 1920.
Sylvanite Gold Mines, Limited, (No Personal Liability) (Re-dividing capital stock)	July 20, 1921.
T	
Thomson Knitting Company, Limited (Authorizing the Company to pay a commission)	Sept. 15, 1921.
Times-Journal of Fort William, Limited, (Decreasing the number of directors; re-dividing capital; extending powers)	Jan 8, 1921.
Toronto & District Football Association, The, (Extending the powers of the Company)	Jan. 28, 1921
Toronto Skating Club, (Extending the powers of the Company)	Mar. 7, 1921.
Traders Co-operative Exchange, Limited (Amending powers)	May 9, 1921
Turnbull Mines of Porcupine, Limited (No Personal Liability) Authorizing the Company to keep its books outside of the Province of Ontario	Apr. 11, 1921.

List of Corporations whose Powers were Extended (Concluded).

Name	Date
U	
Uxbridge Hardware Company, Limited, The, (Extending the powers of the Company)	Jan. 14, 1921.
W	
Wahl Company, Limited, The (Authorizing the Company to keep its books outside of the Province)	Sept. 20, 1921.
Walker, Limited, G. Hawley (re-dividing the capital of the Company)	Apr. 15, 1921
Westmount Improvement Company, Limited (Extending the powers of the Company)	May 9, 1921.
Willys-Overland, Limited, (Varying and amending preference share clauses)	July 15, 1921.
Women's Century Publishers, Limited (Varying and amending Letters Patent re-dividing capital stock of the Company)	Sept. 29, 1921.
Y	
Yorkshire Worsted Company, Limited, The, (authorizing the Company to pay a commission)	July 12, 1921.
Z	
Zimmerman Brothers, Limited (Converting unissued common stock into preference stock)	Jan. 10, 1921.

List of Companies whose Capital was Decreased.

Name of Company	From	To	Date
B			
Beaver Brass Manufacturing Company, Limited, The	$ 40,000	$ 34,000	Mar. 30, 1921.
British American Security Company, Limited	200,000	100,000	Nov. 24, 1920.
C			
Croyebert, Limited	500,000	300,000	Dec. 28, 1920.
M			
Meaford Steel Products, Limited	250,000	228,500	Aug. 19, 1921.
S			
Sault Sainte Marie Skating Rink and Athletic Company, Limited	50,000	38,000	Jan. 6, 1921.

List of Corporations without Share Capital.

Name of Corporation	Place
A	
Alexander George Rosemond Memorial, The	Almonte.
Alumni Federation of the University of Toronto, The	Toronto.
Associated Public Accountants	Toronto.
Associated Synagogues of Toronto, The	Toronto.
B	
Bachelors Club of Ottawa, The	Ottawa.
Beach Grove Country Club	Walkerville.
Belmont Club, The	Peterborough.
Big Sister Association of Ottawa, The	Ottawa.
Bon-Ton Club, The	Embro.
Brigden Farmers' Co-operative Company, Limited	Brigden.
C	
Campbellville Amateur Athletic and Community Association, The	Campbellville.
Canada Cement Club of Belleville, The	Twp. of Thurlow.
Canadian Anti-Vivisection Society	Toronto.
Canadian Society of Sales Executives, The	Toronto.
Capital Recreation Club of Ottawa	Ottawa.
Capreol Driving Club	Capreol.
Carleton County United Farmers' Political Association	Richmond.
Central Registry of Graduate Nurses, Toronto, The	Toronto.
Cevra Benei Yankov Anshei Beizetchin Congregation	Toronto.
City Temple, The	Toronto.
Clandeboye Farmers' Co-operative Company, Limited, The	Clandeboye.
Clayton Recreation Club	Clayton.
Clover Club, The	Ottawa.
College Recreation Club	Toronto.
Congregation Bnia Israel of Timmins, The	Timmins.
Contracting Plasterers' Association of Toronto, The	Toronto.
Cosby-Martland Co-operative Co., Limited, The	Noelville.
D	
Downtown Association of Toronto, The	Toronto.
Dufferin United Farmers' Political Association	Shelburne.
Dump Truck Owners' Association of Ontario, The	Toronto.
Dundas-Stormont United Farmers' Political Association	Chesterville.
Durham United Farmers	Orono.
E	
Eagle River U. F. W. Co-operative Club, Limited	Eagle River.
East Algoma United Farmers' Political Association, The	Gore Bay.
East Hastings United Farmers' Political Association, The	Madoc.
East Lambton United Farmers' Political Association, The	Alvinston.
East Middlesex United Farmers' Political Association	London.
East Peterborough United Farmers' Political Association, The	Norwood.
East Simcoe United Farmers' Political Association	Orillia.
Excelsior Sporting Club	Toronto.
F	
Federation of Women Teachers Association of Ontario	Toronto.
Fort William and Rainy River U. F. Political Association	Burriss.
Frontenac United Farmers' Poltical Association, The	Kingston.
G	
Glasgow and District Association	Toronto.
Glengarry and Stormont U. F. Political Association	Apple Hill.

List of Corporations without Share Capital (Continued).

Name of Corporation	Place.
Gospel Tabernacle, Toronto, The	Toronto.
Great War Memorial Hospital of Perth District, The	Perth.
Grenville County United Farmers Political Association	Spencerville.
H	
Haldimand United Farmers' Political Association	Cayuga.
Halton Peoples' Political Association, The	Milton.
Hamilton Real Estate Board, The	Hamilton.
H	
Hearst Athletic Association, The	Hearst.
Home Furnishings Bureau	Toronto.
Hrushewski Library of Education, The Michael	Oshawa.
Humber Valley Golf Club, The	Toronto.
I	
Independent Progressive Association, The	Ottawa.
International Bass Club, The	Brantford.
K	
Kent United Farmers' Political Association	Chatham.
L	
Lake Marie & King Athletic Association	King.
Lakeview Ratepayers' Association	Toronto Twp.
Lanark U. F. Political Association	Perth.
L'Association Technologique de Langue Francaise d'Ottawa	Ottawa.
La Societe Des Amis Du Sacre-Coeur De L'Ecole Guigues	Ottawa.
La Societe des Anciens Eleves de l'Academe de La Salle	Ottawa.
Leeds United Farmers' Political Association	Lansdowne.
Lennox and Addington United Farmers' Political Association	Napanee.
Lincoln County United Farmers' Political Association	St. Catharines.
Loyal True Blue and Orange Home	Toronto.
M	
Mary Grant Society, The	Windsor.
Master Cleaners' and Dyers' Association	Toronto.
Merchants Protective Association of Ontario	Toronto.
Muskoka United Farmers' Political Association, The	Bracebridge.
N	
National Canary Society, The	Toronto.
New Hamburg Lawn Bowling Club	New Hamburg.
Niagara Cottage Hospital, The	Niagara-on-the-Lake.
Nipissing United Farmers' Political Association, The	Verner.
Norfolk County United Farmers' Political Association	Simcoe.
North Brant United Farmers' Political Association, The	Brantford.
North Bruce U. F. and U. F. W. Political Association	Allenford.
North Grey United Farmers' Political Association, The	Owen Sound.
North Hastings United Farmers' Political Association, The	Bancroft.
North Huron United Farmers' Political Association, The	Wingham.
North Ontario United Farmers' Political Association	Beaverton.
North Oxford United Farmers Political Association	Woodstock.
North Perth Labor Political Association	Stratford.
North Perth United Farmers' Political Association, The	Milverton.
North Renfrew United Farmers' Political Association	Pembroke.
North Simcoe United Farmers' Political Association	Stayner.
North York United Farmers' Political Association	Newmarket.

List of Corporations without Share Capital (Continued).

Name of Corporation	Place.
North Wellington United Farmers' Political Association	Drayton.
Northcliffe Club	Toronto.
Northumberland County United Farmers' Political Association, The	Warkworth.
Norwich Co-operative Association, Limited	Norwich.
O	
166th (Q. O. R.) Overseas Battalion Association	Toronto.
Ontario Association for the Blind, The	Toronto.
Ontario Baker Heirs Association	Toronto.
Ontario Dental Association, The	Toronto.
Ontario Medical Association	Toronto.
Ontario Public School Men Teachers' Federation	Toronto.
Ontario Rifle Association, The	Toronto.
Ontario Society of Occupational Theraphy, The	Toronto.
Ontario Sportsmen's Game and Fish Protective Association, The	Toronto.
Ottawa Real Estate Board, The	Ottawa.
P	
Parham Farmers' Co-operative Company, Limited	Parham.
Peel County United Farmers' of Ontario Political Association	Chinguacousy Twp.
Peel Memorial Hospital Association	Brampton.
Police Association of Hamilton, The	Hamilton.
Port Arthur and Kenora United Farmers' Political Association	Dryden.
Princess Club	Ottawa.
R	
Regents Park Ratepayers' Association, The	Twp. of Scarborough.
Ridgeway Athletic Association	Ridgeway.
Russell United Farmers' Political Association	Vars.
S	
Salonica Club, The	Toronto.
Severn Falls Golf and Outing Club, The	Toronto.
Society of Canadian Authors, The	Toronto.
South Brant United Farmers' Political Association	Brantford.
South Bruce United Farmers' Political Association	Walkerton.
South East Grey U. F. Political Association	Twp. of Normandy.
South Essex United Farmers' Political Association, The	Malden.
South Huron United Farmers' Political Association	Hensall.
South Ontario United Farmers' Political Association, The	Brooklin.
South Oxford United Farmers' Political Association	Woodstock.
South Perth United Farmers' Political Association	St. Mary's.
South Renfrew U. F. Political Association	Twp. of Admaston.
South Simcoe United Farmers' Political Association, The	Cookstown.
South Waterloo People's Progressive Political Association	New Dundee.
South Wellington U. F. Political Association	Guelph.
St. Catharines Chamber of Commerce, The	St. Catharines.
St. Catharines Concert Band Association, The	St. Catharines.
St. Clair Beach Golf Club	Walkerville.
St. Clair Literary Club	Toronto.
Stockdale Cemetery Association	Stockdale.
Syrian Orthodox Benevolent Society, The	Toronto.
T	
Talmud Taroh Beth Yitzchoch Yankov Reines Hebrew School, The	Toronto.
Temiskaming United Farmers' Political Association	New Liskeard.
Toronto Camera Club, The	Toronto.
Toronto Chinese Young Men's Christian Institute	Toronto.
Toronto Homebuilders' Association, The	Toronto.
Toronto Jewish Convalescent and Maternity Hospital, The	Toronto.

List of Corporations without Share Capital (Concluded).

Name of Corporation	Place
Toronto Real Estate Board, The	Toronto.
Toronto Social and Literary Club	Toronto.
Toronto Typothetae	Toronto.
Toronto Waiters' & Cooks' Social Club, The	Toronto.
U	
United Farmers' Political Association of Parry Sound District	Burk's Falls.
Universal Negro Improvement Association, The	Toronto.
Uxbridge Bowling Club, The	Uxbridge.
V	
Victoria and Haliburton United Farmers' Political Association	Lindsay.
W	
Walkerville Tennis Club	Walkerville.
Wallaceburg War Memorial Hospital	Wallaceburg.
Waterloo County Health Association	Kitchener.
Welland County Progressive Political Association	Welland
Wentworth United Farmers' Political Association	Lynden.
West Algoma United Farmers' Political Association	Bar River.
Westboro Swimming Club	Westboro.
West Elgin United Farmers' Political Association	Dutton.
West Lambton United Farmers' Political Association	Brigden.
West Middlesex United Farmers' Political Association	Strathroy.
West Peterborough United Farmers' Political Association	Peterborough.
West Toronto Community Association	West Toronto.
West York United Farmers' Political Association	Woodbridge.
Whitby Memorial Hospital	Whitby.
X	
Xi Psi Phi Chapter House Association	Toronto.
Y	
York Lawn Bowling Association	Toronto.
Young Men's Hebrew Association (Ottawa)	Ottawa.

List of Corporations whose Names were Changed.

From.	To.	Date.
B		
Banigan, Armstrong & Thompson, Limited	Armstrong Company, Limited, N. A.	Sept. 7, 1921.
Barnard Machinery Co., Limited	Canners Machinery, Limited	June 6, 1920.
Batt's, Limited	Buyer's Door and Manufacturing Company, Limited, The	May 13, 1921.
Border Cities Exchange, Limited	Traders Co-operative Exchange, Limited	May 9, 1921.
Brigden Farmers' Co-operative Company, Limited	Brigden Co-operative Company, Limited	Sept. 9, 1921.
C		
Canadian Service Stations, Limited	Robin Hood Service Stations Limited	Mar. 29, 1921.
Central Canada Bond Corporation, Limited	Central Dominion Investments, Limited	Aug. 5, 1921.
Central Dominion Investments, Limited	Securities & Trade Corporation, Limited	Aug. 30, 1921.
Channell Chemical Company, Limited	Channell, Limited	Dec. 31, 1920.
Cockburn and Baehrack, Limited	Cockburn, Limited, A. A.	Oct. 4, 1921.
Crane Newall and Selby, Limited	Crane Bolander and Selby, Limited	Feb. 5, 1921.
D		
Directors of the School Sisters of Notre Dame of Ontario, The	School Sisters of Notre Dame of Ontario, The	June 4, 1921.
Durant Motor Company of Canada, Limited	Durant Motors of Canada, Limited	Sept. 26, 1921.
F		
Fidelity Agency Corporation, Limited	Fidelity Agency of Canada, Limited	Jan. 26, 1921.
Finch & Anderson, Limited	Frank Anderson, Limited	Sept. 7, 1921.
G		
Goodman and Rosenthal, Limited	Goodman, Limited, Benjamin	June 30, 1921.
Greens Hamilton, Limited	Greens of Hamilton, Limited	Jan. 4, 1921.
Goldstein Jewellry Mfg. Co., Limited, The	Goldstein Manufacturing Company, Limited	May 21, 1921.
H		
Holden-Morgan Thread Miller, Limited	Holden-Morgan, Limited	Dec. 6, 1920.
I		
Ivey Storage Batteries, Limited	Visible Storage Batteries, Limited	Feb. 3, 1921.
J		
Jacobs & Goodman, Limited	Jacobs Pant Company, Limited	Oct. 26, 1921.
James Company, Limited, A. E.	James, Proctor & Redfern, Limited	Feb. 9, 1921.
K		
Knechtel Kitchen Cabinet Company, Limited, The	Knechtel Kitchen Kabinet, Limited	May 4, 1921.
L		
Labrador Medical Mission	Grenfell Labrador Medical Mission, The	Mar. 18, 1921.
Lockwood Textile Company, Limited	Brantford Textile Company, Limited	Oct. 20, 1921.

List of Corporations whose Names were Changed (Continued).

From.	To.	Date.
M		
Matthews & Slade, Limited	Metal Stampings, Limited	Jan. 17, 1921.
Meehan & Regan, Limited	Meehans, Limited	Oct. 12, 1921.
McAlpine-Richardson Company, Limited, The	McAlpine Company, Limited, The J.W	Feb. 16, 1921.
Mutuel Totalizer Company, Limited.	Pari-Mutuel Totalizer Company, Limited	Dec. 2, 1920.
N		
National Typewriter Company, Limited, The	National Stationers, Limited	Feb. 11, 1921.
Nitro Electric Company, Limited	Electrical & Theatre Equipment, Limited	Feb. 5, 1921.
North Davidson Mines, Limited (No Personal Liability)	Beaumont Gold Mines, Limited, (No Personal Liability)	Jan. 22, 1921.
O		
Ontario General Bankers Corporation, Limited	Municipal Bankers Corporation, Limited	Apr. 5, 1921.
P		
Page & Company, Limited, B.	Capital Salvage Company, Limited	Oct. 20, 1921.
Peebles, Hobson & Company, Limited	Hobson & Co., Limited	Feb. 15, 1921.
Photography, Limited	Pittaway Jarvis, Limited	Mar. 16, 1921.
Q		
Quinn's Drug Store, Limited	Denman and Munro, Limited	Aug. 22, 1921.
R		
Reid-Riddell Engineering Company, Limited	Reid and Somers, Limited	June 20, 1921.
S		
Selak Orth, Limited	Orth, Limited	Nov. 1, 1920.
Sinclair Allen & Company, Limited	Eaton, Crane & Pike Co., of Canada, Limited	April 5, 1921.
Smith-Drew, Limited	Leberman-Drew, Limited	Aug. 4, 1921.
Sons of Poland Friendly Society	Polish Alliance Friendly Society of Canada	Sept. 3, 1921.
Soy Products, Limited	Milqo, Limited	Aug. 13, 1921.
Standard Paper Boxes, Limited	Ingersoll Paper Box Co., Limited	Mar. 12, 1921.
Stansell Motors, Limited	Brock Motors, Limited	April 13, 1921.
Superior Printing Company, of Fort William, Limited, The	Times-Journal of Fort William Limited	Jan. 8, 1921.
T		
Technical Services, Limited	Eddy Seed Cleaners, Limited	May 18, 1921.
Thomsons, (Textiles) Limited	Thomson Knitting Company, Limited.	May 17, 1921.
Tomlinson and Harold, Limited	Harold and Goetz, Limited	Aug. 16, 1921.
Toronto-Great Lakes Oils, Limited	Anglo Oil Company, Limited	May 17, 1921.
Toronto Specialty Manufacturing Company, Limited	Ontario Specialty Manufacturing Company, Limited	May 20, 1921.
Trans-Canada Land and Agencies, Limited	Trans-Canada Agencies, Limited	Nov. 3, 1920.
U		
United Service Company, Limited	United Secret Service, Limited	Oct. 13, 1921.
W		
Windsor Veterans Contracting Company, Limited	Steward Construction Company, Limited	July 25, 1921.
Whitby Financial Corporation, Ltd.,	Bowmanville Financial Corporation, Limited	Aug. 18, 1921.

List of Corporations whose Charters were Surrendered.

Name.	Date.
A	
Alabastine Hardmortar, Limited	Nov. 2, 1920.
American Rattan Company of Walkerton, Limited, The	June 4, 1921.
Andrew Malcolm Furniture Company, Limited, The	Dec. 31, 1920.
B	
Baker & Baldwin, Limited	Apri. 25, 1921.
Baker's, Limited, Joseph	Sept. 30, 1921.
Barber Paper and Coating Mills, Limited	Oct. 11, 1921.
Barrie's Limited	Feb. 8, 1921.
Barton & Bimbrook Telephone Company, Limited, The	Oct. 11, 1921.
Bates & Innis, Limited	Mar. 17, 1921.
Beach Foundry Company, Limited, The	Dec. 28, 1920.
Bedford Park Floral Company, Limited, The	Nov. 16, 1920.
Bishopric Wall-Board Company, Limited	Apr. 8, 1921.
Bowden & Sons, Limited, Frank A	Jan. 12, 1921.
Bowes Milk Products, Limited	May 28, 1921.
Brantford Piano Case Company, Limited	July 26, 1921.
British American Metal Company, Limited	Mar. 3, 1921.
Burlington Steel Company, Limited	Mar. 3, 1921.
B & T. Manufacturing Company, Limited, The	May 3, 1921.
C	
Canadian Canners, Limited	Apr. 8, 1921.
Canadian Cartridge Company, Limited	Apr. 7, 1921.
Canadian Industrial Minerals, Limited	Sept. 29, 1921.
Canadian Metal Window Company, Limited	Dec. 7, 1920.
Canadian Pearl Button Company, Limited	Jan. 19, 1921.
Canadian Sand and Gravel Company, Limited, The	July 11, 1921.
Carter-Crume Company, Limited, The	Aug. 1, 1921.
Cedar Point Park Company, Limited	Jan. 7, 1921.
Cochrane Telephone Company, Limited	May 23, 1921.
Comfort Mining and Leasing Company, Limited, (No Personal Liability)	Apr. 25, 1921.
Chesley Public Buildings Company, Limited, The	May 3, 1921.
Craig-Stell, Limited	Oct. 18, 1921.
D	
Dental Company of Canada, Limited, The	July 28, 1921.
Dominion Mineral Resources, Limited	July 28, 1921.
E	
Eaton and Sons, Limited, J. R.	Mar. 12, 1921.
Edwards Company of Ontario, Limited, The Matthew	June 25, 1921.
Elora White Line Company, Limited	Nov. 13, 1920.
F	
Farmer Brothers, Limited	Mar. 4, 1921.
Farmers' Elevator Company of Forest, Limited, The	May 27, 1921.
Fairmount Property Company Limited	Apr. 2, 1921.
Forest Hotel Company, Limited, The	Mar. 31, 1921.
G	
Galbraith & Company, Limited	Apr. 27, 1921.
Granite Crushed and Dimension, Limited	May 23, 1921.
Green Co., Limited, The G. Walter	Dec. 30, 1920.

List of Corporations whose Charters were Surrendered (Continued.)

Name.	Date.
H	
Ham and Nott Company, Limited, The	Dec. 30, 1920.
Hamilton Stock Yards Company, Limited, The	Jan. 3, 1921.
Hamilton Warehouse and Forwarding Company, Limited, The	May 13, 1921.
Hibernian Hall Association, Limited, The	Apr. 5, 1921.
Highway Gardens, Limited	Dec. 20, 1921.
His Master's Voice, Limited	Feb. 1, 1921.
Hoodless Furniture Company, Limited, The J.	Dec. 6, 1920.
Howell, Limited, Warner W	Feb. 14, 1921.
Humber Cement Brick Company, Limited, The	Apr. 18, 1921.
I	
Indian Peninsula Mining Company, Limited	Jan. 27, 1921.
J	
Jones Hardware Company, Limited, The	Feb. 4, 1921.
K	
K. & S. Canadian Tires, Limited	Dec. 13, 1920.
K. & S. Canadian Tire Co., Limited	Dec. 13, 1920.
K. & S. Canadian Tire & Rubber Co., Limited	Dec. 13, 1920.
L	
Lake Commerce, Limited	May 7, 1921.
Lakes Timber Company, Limited The	Dec. 20, 1920.
Lee, Limited, R. W.	June 6, 1921.
Lincoln County Greater Production Company, Limited, The	June 17, 1921.
Littlejohn and Vaughan, Limited	Oct. 31, 1921.
Loblaw Groceterias, Limited, The	Oct. 17, 1921.
M	
MacBride Press, Limited, The	July 11, 1921.
MacLean Daily Reports, Limited	June 2, 1921.
MacLean, Limited, Hugh C	June 2, 1921.
Medland, Limited, T. J.	June 13, 1921.
Minister Myles Shoe Company, Limited	Apr. 22, 1921.
N	
New Toronto Leather Works, Limited	June 7, 1921.
Niebergall Stave and Lumber Company of Staples, Limited, The	Nov. 13, 1920.
North Thompson Gold Mines, Limited, The, (No Personal Liability)	Dec. 20, 1920.
O	
Orford Farmers' Co-operative Company, Limited, The	Jan. 28, 1921.
Ottawa Power Company, Limited, The	Dec. 29, 1920.
P	
Page-Hersey Iron Tube and Lead Company, Limited	Jan. 13, 1921.
Petrol Oil & Gas Company, Limited, (No Personal Liability)	Feb. 2, 1921.
Perth Felt Co., Limited	Mar. 17, 1921.
Port Arthur Pulp and Paper Company, Limited	Oct. 11, 1921.
Preston Furniture Company, Limited, The	Dec. 17, 1920.
Preston Swimming and Mineral Baths Company, Limited, The	Mar. 24, 1921.
Proctor Realty Company, Limited, The	June 17, 1921.

List of Corporations whose Charters were Surrendered. (Concluded)

Name.	Date.
Q	
Queenston Quarry Company, Limited, The	July 29, 1921.
R	
Randall Grape Juice Company, Limited, The	Apr. 6, 1921
Rideau Realty Company, Limited	Sept. 27, 1921
Rittinger and Motz, Limited	Apr. 29, 1921.
Rockwood Realty, Limited	June 6, 1921.
S	
Secord & Sons, Limited, P. H.	Feb. 1, 1921.
Smith's Falls Malleable Castings Company, Limited, The	Jan. 12, 1921.
Spiesz Furniture Company, Limited, The	Dec. 24, 1920.
Spruce Falls Pulp & Paper, Limited	Nov. 16, 1920.
St. Lawrence Paper Mills Company, Limited	Oct. 11, 1921.
T	
Toronto Furnace and Crematory Company, Limited, The	Aug. 15, 1921.
Toronto Wool Scouring Company, Limited	Jan. 5, 1921.
Tuckett, Limited	Jan. 6, 1921.
W	
Wahl Company, Limited, The	Sept. 20, 1921.
Walkerton Hosiery Company, Limited, The	Apr. 18, 1921.
Waterloo Grand Stand Company, Limited, The	Mar. 11, 1921.
Wellington Hotel Company, Limited, The	Dec. 13, 1920.
Whitechurch Cheese and Butter Manufacturing Company, Limited, The	June 7, 1921.
Windsor Building and Land Company, Limited, The	May 23, 1921.
Woodburn Mills, Limited	Jan. 15, 1921.
Woodbridge Rudd Harness Company, Limited	June 2, 1921
Woodstock Hotel Company, Limited, The	Dec. 20, 1920.
Wood-Worker Publishing Company, Limited, The	June 2, 1921.
Y	
Young's Cafe, Limited	Dec. 23, 1920.

List of Corporations Licensed to do Business in Ontario.

Name of Corporation	Where Incorporated	Attorney
A		
Abrasives, Limited	Dominion	William Thomas Henderson.
American Commerce Association, The	Illinois	Thomas Roberts Ferguson.
American Rolling Mill Company, The	Ohio	Raymond Decker Black.
Anglo-Canadian Associates, Limited	Dominion	Alfred Sear.
Argonaut Gold, Limited	Dominion	John W. Morrison.
Associated First National Pictures, Inc	Delaware	R. Wylie Hart.
B		
Backus-Brooks Company	Maine	The Keewatin Lumber Co., Ltd.
Birks Buildings, Limited	Quebec	Howard S. Porter.
Brant Amusements, Limited	Dominion	William Thomas Henderson.
Brantford Roofing Company, Limited	Dominion	William Thomas Henderson.
Brantford Sales, Limited	Dominion	William Thomas Henderson.
British Piston Ring Company, (Canada) Limited	Alberta	William J. Lines.
Buhl Stamping Company	Michigan	John Henry Coburn.
C		
Canada Gelatine Company, Limited	Dominion	William Thomas Henderson.
Canadian Drill Company, Limited	Dominion	James Steller Lovell.
Canadian Grape Products, Limited	Dominion	William Thomas Henderson.
Canadian Horse Shoe Company, Limited	Dominion	Robert Christian McElroy.
Canadian Libbey-Owens Sheet Glass Company, Limited	Dominion	John Turner Richardson.
Canadian Linoleums & Oilcloths, Limited	Dominion	R. E. Kingsley.
Canadian Paperboard Company Limited	Dominion	Henry Hague Davis.
Canadian Transfer Company, Limited	Dominion	John Thomson.
Cassidy's, Limited	Dominion	George William Brown.
Clemson Bros., Inc	New York	Fredrick James Macdonell.
Columbia Graphophone Manufacturing Company	Delaware	John Dawson Montgomery.
Consolidated Molybdenum Steel Corporation	Delaware	Edgar Ainslie Wright.
Consolidated Steel Corporation	Delaware	Allan Hills.
Cosmopolitan Distributing Corporation	New York	W. R. P. Parker.
Crawley & McCracken Company, Limited, The	Quebec	George J. Valin.
D		
Dalley Company of Canada, Limited, The	Dominion	Frederick Fenner Dalley.
Dalley Products, Limited	Dominion	Frederick Fenner Dalley.
Dickson Creek (Cobalt) Silver Mines, Limited	Gt. Br. & Ire	Henry Hollands-Hurst.
Dominion Battery Company, Limited, The	Dominion	Alexander Fasken.
Dominion Road Machine Company, Limited, The	Dominion	Curtis Linn Moore.
Dryden Paper Company, Limited	Dominion	James Brooks Beveridge.
E		
Eclipse Machine Company, Limited	Dominion	John Henry Coburn.
Empire Asbestos Mines, Company	Delaware	Frank Denton.
Employers' Detective Agency, Limited	Dominion	Alexander R. Cochrane.
Eureka Flint and Spar Company, The	New Jersey	George Herbert Smyth.
Export Lumber Company	Massachusetts	Gilbert Allan.
F		
Felt and Terrant Manufacturing Company	Illinois	Henry Alexander Moffat.
Folker Company, The	Michigan	William MacKay Wright.
Fraser, Brace, Limited	Dominion	J. R. L. Starr.
Freedman, Limited, William	Dominion	William Freedman.
Fulton Motors Limited	Dominion	Claude William Whitmore.

List of Corporations Licensed to do Business in Ontario—Continued

Name of Corporation	Where Incorporated	Attorney.
G		
General Oil Gas Corporation	Virginia	George M. Clark.
Gove Motor Car Company	Delaware	James Foster.
Grant & Company, Limited, J. A.	New Brunswick	James Stellar Lovell.
Greater Canada Security Corporation, Limited	Dominion	Clarence Burlingham Morgan.
Grolier Society, Limited, The	Dominion	Claude C. Harding.
H		
Hamilton-Bothwell Oil Company, Limited	Dominion	Aden Arenzo Hurst.
Hartwell Brothers, Limited	Dominion	John Henry Coburn.
Harvey Bros., and Semple, Limited	Manitoba	William Harvey.
Herbert, Limited, Alfred	Gt. Br. & Ire.	James C. Blair.
Hollins & Company, Limited, William	Gt. Br. & Ire.	Alexander Faskin.
Home Development Company	Michigan	Austin B. Gray.
House of Hobberlin, Limited, The	Dominion	Andrew Matthew Hobberlin.
K		
Kanawha Pocahontas Coal Company	West Virginia	Thomas Gibson.
Kraft McLaren Cheese Company, Limited	Dominion	Henry Wright.
L		
Loew's Hamilton Theatres, Limited	Dominion	Samuel D. Fowler.
Lynch Timber Company	Michigan	Percival T. Rowland.
M		
MacKenzie Manufacturing Co., Limited	Dominion	John Augus MacKenzie.
MacNeil Liquid Wax Company, Limited, The	Nova Scotia	William David McPherson.
Maguire, Patterson & Palmer (Canada) Limited	Dominion	Edward A. Dunlop.
Managers, Limited	Quebec	William Symon Morlock.
Manitowoc Shipbuilding Corporation	Wisconsin	Robert Benjamin Henderson.
Measuregraph Company, of Canada	Dominion	Oscar H. Pierce.
Mentholatum Company, The	Kansas	George H. Strayton.
Merrill Corporation, The	Arizona	Eric Wilson.
Metropolitan Stores, Limited	Dominion	Albert H. Murphy.
McClintic-Marshall Products Company	Pennsylvania	Frank McCarthy.
McKinnon Industries, Limited	Dominion	Lachlan Ebenezer McKinnon.
Miller-York, Inc	Michigan	Edmund Anderson Cleary.
Moto Meter Company of Canada, Limited, The	Dominion	James Steller Lovell.
Motor Products Corporation	New York	Albert John Gordon.
Multipost Company	New York	Murtin George Tustin.
N		
North-East Service, Inc	New York	W. R. P. Parker.
O		
Oakoal Company (Canada) Limited, The	Dominion	Arthur Carson McMaster.
P		
Pelman Institute, Limited, The	Gt. Br. & Ire.	John Bell Holden.
Pembroke Lumber Company, Limited	Dominion	E. A. Dunlop.
Perfection Flax Pulling Machines, Limited	Dominion	John Bogert Bertram.
Peterborough Cereal Company, Limited	Dominion	John Wenger Meyers.
Piano Cases and Phonographs, Limited	Dominion	William Thomas Henderson.
Pitman and Sons, Limited, Sire Isaac	Gt. Br. & Ire.	Frederick George, London.
Pressed Compositions, Limited	Nova Scotia	George Edward Lindsay.

List of Corporations Licensed to do Business in Ontario (Concluded).

Name of Corporation	Where Incorporated	Attorney
Q		
Quarrie & Company, W. F.	Illinois	Glenn C. Wilson
R		
Realty Development Corporation	Michigan	Raymond B. Marenette.
Rock Products Company, The	Ohio	James Benton.
Russel & Sons, Limited, Hugh	Dominion	Archibald Montgomery Russel.
S		
Scarfe and Company, Limited	Dominion	William Thomas Henderson.
Smoot Corporation, The	Delaware	James Steller Lovell.
Sterling Motor Truck Company	Wisconsin	Frank Erichsen Brown.
Sterno of Canada, Limited	Dominion	Ruthven Hay.
Thomas Nelson & Sons, Limited	Gt. Br. & Ire	Sydney Blumer Watson
Truscon Steel Company	Michigan	O. A. Cole.
U		
United Retail Stores Candy Company, Ltd.	Dominion	W. R. P. Parker.
Unlisted Securities Corporation, Limited	Dominion	Hon. William David McPherson
W		
Western Waterproofing Company.	Michigan	Frank Wice.
Wheeling Feldspar Company	West Virginia	A. J. Linton.
White Company of Canada, Limited, S. S.	Dominion	Alexander Fasken.
Wiser's Distillery, Limited	Dominion	Patrick Kernan Halpin.

List of Corporations to whom Further Licenses were Issued.

Name	Date
A	
Arrowhead Mills, Inc. (increasing capital)	Mar. 7, 1921.
B	
Belding-Corticelli, Limited (changing name from Belding Paul Corticelli, Ltd.)	Jan. 11, 1921.
Brunner Mond Canada, Limited	Nov. 23, 1920.
Burroughs & Watts, Limited (increasing capital)	Nov. 4, 1920.
D	
DeLaval Company, Limited, The (increasing capital)	Feb. 23, 1921.
Detroit Sulphide Pulp and Paper Co. (authorizing the corporation to use in Ontario capital to the extent of $550,000)	June 16, 1921.
I	
Interprovincial Brick Company of Canada, Limited, (increase of capital)	Nov. 4, 1920.
J	
Jaeger Company, Limited, The	June 28, 1921.
L	
Lake Erie Excursion Company, The (authorizing corporation to use in Ontario capital to the extent of $500,000)	Sept. 14, 1921.
M	
Mutual Finance Corporation, Limited (increase of capital)	Nov. 24, 1920.
N	
Nineteen Hundred Washer Company, The (increase of capital)	April 20, 1921.
North American Dye Corporation, Limited, The (increase of capital)	April 22, 1921.
S	
Saskatchewan Co-operative Export Company, Limited, (increase of capital)	May 11, 1921
T	
Toledo Scale Company (changing name from Toledo Computing Scale Company)	Dec. 13, 1920

List of Corporations to whom Licenses in Mortmain were Issued.

Name of Corporation	Where Incorporated	Date
B		
Bates & Innes, Limited	Dominion	June 16, 1921
Beach Foundry, Limited	Dominion	May 31, 1921
C		
Canada Barrels & Kegs, Limited	Dominion	June 28, 1921
Canadian Kodak Co., Limited	Dominion	July 28, 1921
Canadian Mead-Morrison Company, Limited	Dominion	Aug. 5, 1921
Canadian Perfect Wheels, Limited	Dominion	June 28, 1921
Canadian Toledo Scale Company, Limited	Dominion	Aug. 22, 1921
Commonwealth-Federal Savings Bank	Michigan	July 28, 1921
D		
Dominion Gas Meter Company, Limited, The	Dominion	July 13, 1921
E		
Engineering and Machine Works of Canada, Limited	Dominion	Aug. 5, 1921
F		
Fidelity Trust Company of Buffalo, The	New York	Nov. 18, 1920
G		
Governing Council of the Salvation Army, Canada, East, The	Dominion	Nov. 9, 1920
H		
Happy Thought Foundry Company, Limited	Dominion	June 9, 1921
Hawthorn Mills, Limited	Dominion	June 16, 1921
Hertel Harsman Company, Limited	Dominion	June 16, 1921
Holstein Friesian Association of Canada, The	Dominion	Nov. 9, 1920
Hosiers, Limited	Dominion	Sept. 20, 1921
I		
Iron Works, Limited, The	Dominion	July 25, 1921
L		
Laidlaw Lumber Company, Limited, R	Dominion	Mar. 17, 1921
M		
Maclaren Company, Limited, The James	Dominion	May 17, 1921
Metropolitan Corporation, Limited	Dominion	July 13, 1921
Mining Corporation of Canada, Limited, The	Dominion	June 28, 1921
N		
National Council of Young Men's Christian Associations of Canada	Dominion	July 29, 1921
P		
Parsons & Parsons Canadian, Limited	Dominion	July 13, 1921
Patterson, Limited, William	Dominion	April 30, 1921
R		
Reford Company, Limited, The Robert	Dominion	June 28, 1921
S		
Slater Company, Limited, N	Dominion	Oct. 25, 1921
Superior Brick & Tile Company, Limited	Dominion	June 16, 1921
W		
Wright Co., Limited, E. T	Dominion	Oct. 25, 1921

Proclamations Gazetted, 1921.

Name.	Date
Re An Act to Provide for the Maintenance of Parents by their Children	June 25, 1921
Re An Act respecting The Goodyear Tire and Rubber Company of Canada, Limited	June 18, 1921
Re An Act respecting the Transportation of Intoxicating Liquors, to come into force July 19, 1921	July 9, 1921
	July 16, 1921
Re Appointment of Henry Cockshutt as Lieutenant-Governor of Ontario	Oct. 8, 1921
	Oct. 15, 1921
Re Certain Counties and Districts in Ontario formed into County Court Districts pursuant to The County Judges Act, 1919	Aug. 20, 1921
Re Legislative Assembly to convene on January 25, 1921	Dec. 11, 1920
	Dec. 18, 1920
	Dec. 25, 1920
	Jan. 1, 1921
	Jan. 8, 1921
	Jan. 15, 1921
	Jan. 22, 1921.
Re Reward for information leading to the arrest of the slayer of Dorothy Buchanan	Nov. 6, 1920
	Nov. 13, 1920
Re Reward for information leading to discovery of owner or driver of motor car which killed one Elias Porter Adams near the village of Queenston	Mar. 26, 1921
	April 2, 1921.
	April 9, 1921.
Re Section 9 of the Police Magistrates Extended Jurisdiction Act, 1921, to come into force September 1, 1921	Oct. 1, 1921.
	Oct. 8, 1921.
Re The Agriculture Development Finance Act, 1921, to come into force on October 4, 1921	Oct. 22, 1921.
	Oct. 29, 1921.
Re The Marriage Law Amendment Act, 1921, to come into force October 1, 1921	Sept. 17, 1921.
	Sept. 24, 1921

REPORT

RELATING TO THE REGISTRATION OF

Births, Marriages and Deaths

IN THE

PROVINCE OF ONTARIO

FOR THE

Year Ending 31st December,

1921

(Being the 52nd Annual Report)

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by Clarkson W. James, Printer to the King's Most Excellent Majesty
1923

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THE UNITED PRESS LIMITED
400 Richmond St. W., Toronto

To His Honour the Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I herewith beg to present for your consideration the Fifty-second Annual Report of the Registrar-General, relating to the Registration of Births, Marriages and Deaths in the Province of Ontario, during the year 1921.

Respectfully submitted,

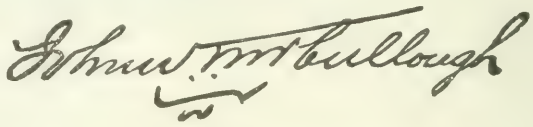
H. C. NIXON,
Registrar-General of Ontario.

SIR:—

I have the honour to submit for your approval the Fifty-second Annual Report made in conformity with and under the provisions of the Act respecting the Registrations of Births, Marriages and Deaths in the Province of Ontario, for the year ending December 31st, 1921.

I have the honour to be, Sir,

Your obedient servant,



Deputy Registrar-General.

To HON. H. C. NIXON,
Registrar-General of Ontario

REPORT UPON

Births, Marriages and Deaths

FOR THE YEAR 1921

The Fifty-second Report of Vital Statistics for the Province of Ontario, for the year 1921, is herewith presented.

POPULATION.

The population of Ontario is 2,933,662, being an increase of 16.08% over that of 1911. This being the year in which the Federal Government took the census of Canada, the population is more accurate than at any time during the past decade.

The cities contained 1,163,133 or 39.7% of the whole, the towns of over 5,000 population 156,497 or 5.3%, and the balance, being 1,614.032 or 55.0% is distributed in the townships, villages and towns under 5,000 population, otherwise designated in this report as "rural."

BIRTHS (Excluding Still-Births).

The number of births registered during the year is, together with those of 1920 as follows:

	1921	Ratio	1920	Ratio
Entire Province	74,152	25.3	72,511	25.0
Cities	32,260	27.7	32,080	27.5
Towns (5,000 population)	4,876	31.2	5,679	33.8
Rural	37,016	22.9	34,752	22.2

There was a numerical increase in births of 1,641 or 2.2% over those of 1920; the rate, however, was but slightly increased (0.3) per 1,000 of population.

Births and birth-rate per 1,000 of population for 10 years.

Year	Births	Ratio	Year	Births	Ratio
1912	58,870	22.9	1917	62,666	22.6
1913	64,516	24.7	1918	64,729	23.0
1914	66,225	25.0	1919	62,774	22.0
1915	67,032	24.9	1920	72,511	25.1
1916	65,264	23.9	1921	74,152	25.3

Mean rate for the decade, 23.9.

There were 38,307 male to 35,845 female births, the ratio being 107 males to 100 females.

BIRTHS BY AGES OF PARENTS IN THE PROVINCE OF ONTARIO, 1921.

AGES OF MOTHERS.

Ages of Fathers	Total	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50–55	Not given
Under 18 years old	18	..	..	..	6	8	5	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	93	..	..	..	9	16	36	14	3	7	3	1	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
19	326	..	..	4	17	37	70	91	55	24	22	4	11	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	3
20	771	..	..	2	18	52	129	175	136	98	54	56	22	10	5	4	2	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
21	1329	..	..	6	19	80	167	229	182	126	170	93	45	33	11	9	7	3	2	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	4
22	1689	..	2	3	18	51	142	225	274	209	270	153	81	62	33	14	12	12	2	2	5	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
23	2198	..	..	3	18	48	117	223	284	327	396	316	206	102	71	31	22	13	5	2	6	3	1	2	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	11
24	2721	..	..	1	22	42	84	208	281	323	441	430	346	194	123	79	60	31	26	..	8	2	..	2	1	1	..	3	..	1	..	..	..	1	..	..	..	..	..	..	6
25	3090	..	1	3	14	34	80	181	220	318	390	441	452	421	239	136	70	34	28	16	10	8	7	4	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	9
26	3338	..	1	3	10	24	82	142	190	284	362	398	483	404	305	228	131	69	50	27	16	11	10	5	6	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3
27	3395	..	..	1	5	30	49	103	148	214	307	356	461	500	453	393	213	135	91	34	39	21	16	7	7	2	3	1	1	1	1	..	..	..	..	..	..	..	..	..	9
28	3803	..	..	..	8	22	44	84	130	201	269	303	434	449	470	391	401	223	160	77	30	28	20	10	11	3	7	2	1	1	..	1	..	..	..	..	..	..	..	..	11
29	3866	..	..	1	6	14	47	67	108	134	221	271	330	376	371	463	467	446	215	120	78	48	32	22	3	8	10	4	7	1	..	..	..	..	1	..	..	..	..	1	15
30	3884	..	..	..	1	11	28	56	102	113	160	212	332	341	364	341	436	436	408	202	120	74	47	31	18	21	7	6	5	..	1	..	..	..	..	..	..	..	1	..	11
31	3554	..	..	2	1	4	22	37	62	104	114	176	222	267	287	295	375	354	401	349	203	96	54	47	23	15	10	7	3	4	1	..	1	..	..	..	..	1	..	..	15
32	3614	..	..	..	3	6	18	24	40	88	129	147	163	241	259	300	358	326	449	334	290	188	84	71	35	14	16	7	6	1	1	..	..	..	..	..	..	..	..	..	13
33	3375	..	..	..	..	6	11	17	32	53	79	135	147	189	212	246	260	282	348	263	338	329	187	93	51	35	20	13	7	8	1	..	3	..	..	..	..	..	..	..	9
34	3115	..	..	..	3	3	10	17	37	42	61	85	135	142	149	186	214	221	306	267	334	276	264	156	68	53	34	19	13	4	4	1	1	..	1	..	..	..	..	..	12
35	3073	..	..	..	2	..	8	11	25	35	51	75	88	162	116	158	193	217	261	237	275	270	264	288	144	69	49	32	14	4	4	4	2	2	1	..	..	..	1	..	11
36	2857	..	..	..	..	1	8	11	22	29	21	51	88	81	125	127	139	175	199	212	240	258	262	271	252	141	85	37	15	9	6	2	2	..	..	..	..	1	..	1	6
37	2516	..	..	..	..	3	6	3	9	18	25	45	53	69	82	135	124	130	146	158	201	207	182	256	242	192	102	66	30	13	11	2	1	..	..	1	..	..	..	..	12
38	2598	..	..	..	..	2	4	4	14	17	20	47	60	52	81	82	152	112	150	119	197	194	222	231	239	169	211	98	60	15	20	12	1	..	1	..	..	1	..	..	8
39	2165	..	..	1	..	..	7	8	6	10	21	31	27	43	56	45	74	108	110	89	154	162	172	203	142	211	193	153	79	28	16	6	..	..	1	..	..	..	..	..	8
40	2076	..	..	..	..	1	3	2	6	3	8	21	26	39	49	82	50	70	125	86	115	117	151	180	195	167	235	147	125	43	37	15	6	1	..	..	..	..	..	..	8
41	1605	..	..	..	..	1	1	3	4	7	10	14	13	15	25	30	45	61	57	104	87	82	81	123	164	129	159	118	120	74	38	22	9	1	..	..	..	..	..	..	3
42	1586	..	..	..	..	..	2	2	5	5	8	15	15	18	26	27	35	46	71	64	108	95	81	105	142	138	140	107	135	89	75	17	9	3	..	1	..	..	1	..	5
43	1191	..	..	1	..	..	1	3	2	9	6	5	11	16	15	20	28	35	33	35	63	92	52	75	89	74	124	95	93	83	70	36	13	6	..	..	..	..	..	..	2
44	931	..	..	..	..	..	1	..	1	5	4	3	9	12	10	15	29	18	39	18	34	56	50	58	57	77	99	76	67	40	61	49	19	16	3	1	2	..	1	..	5
45	999	..	..	..	..	..	..	..	1	4	3	11	6	14	13	14	18	19	36	29	38	48	53	88	72	57	89	85	85	61	54	48	24	21	6	1	..	..	1	..	1
46	763	..	..	..	..	..	1	..	2	2	3	3	..	9	12	8	13	15	25	17	14	32	31	44	69	56	65	60	69	58	39	46	29	23	10	2	..	..	1	..	1
47	619	..	..	..	..	..	..	1	1	4	4	..	1	4	8	11	10	8	17	13	16	18	27	34	55	58	53	42	38	38	48	37	25	26	9	10	2	..	..	..	..
48	596	..	..	..	..	..	..	1	..	2	4	1	7	4	2	3	16	9	16	21	25	22	34	28	33	36	72	55	38	37	49	38	25	10	14	6	4	4	..	3
49	404	..	..	..	..	1	..	..	..	..	..	..	2	6	6	4	7	3	13	8	7	19	11	9	19	26	21	37	42	34	19	24	28	17	7	12	5	8	7	..	..
50	406	..	..	..	..	..	..	..	2	2	2	1	3	2	2	1	8	7	7	11	11	8	14	16	17	16	26	36	29	52	29	30	26	9	16	2	4	9	3	1	1
51	200	..	..	..	..	..	..	..	..	2	..	1	1	1	1	1	5	1	2	10	4	6	7	13	11	13	18	8	24	16	9	21	7	4	1	4	..	1	1	..	2
52	255	..	..	..	..	..	..	..	..	1	1	2	3	1	1	4	1	2	5	7	5	8	11	11	18	9	16	20	9	20	28	24	17	13	8	3	1	3	1	1	2
53	176	..	..	..	..	..	..	..	..	2	1	1	4	3	1	..	3	2	1	4	8	2	7	8	11	8	7	10	16	8	16	17	14	7	7	4	2	2	..	..	..
54	134	..	..	..	..	..	..	..	..	1	..	..	..	2	2	1	..	1	6	3	3	3	5	8	7	8	7	13	15	9	8	9	9	9	4	..	1	2	1	..	..
55	90	..	..	..	..	..	..	..	1	..	..	..	1	2	1	1	1	1	..	..	2	3	1	5	2	2	5	6	8	2	11	3	9	3	3	2	..	..	1	..	1
56	78	..	..	..	..	..	..	..	..	1	..	1	1	..	1	1	3	..	..	5	3	4	1	2	2	5	6	8	2	11	3	9	3	3	2	1	..	..	..	..	..
57	62	..	..	..	..	..	..	..	..	..	1	..	1	1	2	3	3	..	2	2	1	2	1	1	4	1	6	4	6	4	6	1	2	1	1	2	1	..	..	..	..
58	57	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	4	1	3	2	..	..	1	2	3	3	8	3	5	4	2	1	3	1	3	..	2	1	..	..	..
59	38	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1	..	..	2	1	..	1	2	1	1	2	7	3	2	5	3	2	..	2	..	..	..	..	..
60	36	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3	1	1	3	2	3	2	3	2	3	1	1	1	1	1	..	..	1	..	..	1	1
61	20	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	2	1	1	2	1	3	1	2	..	1	2	1	..	..	..	..	..	..	..	..	..
62	22	..	..	..	..	..	..	..	..	..	..	1	1	1	..	2	1	1	1	..	3	..	..	1	2	1	1	1	1	1	2	3	1	1	1	1	..	1	..	..	..
63	16	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2	1	..	..	..	1	2	1	1	..	1	1	1	1	1	1	1	..	..	..	..	..	..

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BIRTHS BY MONTHS AND SEX—1921.

	Sex.	Total.	January.	February.	March.	April.	May	June.	July.	August.	September.	October.	November.	December.	No. prs. twins	No. cases Triplets.	Illegitimates.	Still-births.
Grand Total Province....	..	74152	5977	5694	6769	6603	6773	6190	6341	6330	6185	5909	5577	5804	784	12	1592	3391
Total.....	M	38307	3083	2928	3498	3431	3467	3201	3304	3302	3211	3058	2878	2946	813	25	796	1998
Total.....	F	35845	2894	2766	3271	3172	3306	2989	3037	3028	2974	2851	2699	2585	755	11	796	1393
Total, Cities only.....	..	32260	2675	2595	2904	2724	2937	2886	2765	2696	2610	2564	2419	2585	317	2	1052	1618
Total.....	M	16687	1386	1319	1510	1423	1501	1437	1438	1408	1392	1313	1255	1305	332	2	523	958
Total.....	F	15573	1289	1276	1394	1301	1436	1349	1327	1288	1218	1251	1164	1280	302	2	529	660
Total, Towns, 5,000 pop. and over.....	..	4876	363	372	458	469	437	367	434	391	439	354	416	376	45	....	74	242
Total.....	M	2560	162	202	230	243	242	190	235	203	217	202	228	206	44	....	41	145
Total.....	F	2316	201	170	228	226	195	177	199	188	222	152	188	170	46	....	33	97
Total, Province, excluding Cities and Towns...	..	37016	2939	2727	3407	3410	3399	3037	3142	3243	3136	2991	2742	2843	422	10	466	1531
Total.....	M	19060	1535	1407	1758	1765	1724	1574	1631	1691	1602	1543	1395	1435	437	21	232	895
Total.....	F	17956	1404	1320	1649	1645	1675	1463	1511	1552	1534	1448	1347	1408	407	9	234	636

ILLEGITIMATE BIRTHS.

There were registered 1,592 illegitimate births, which is a rate of 21.5 per 1,000 living births. This is 1.0 higher than for 1920. As usual, the city municipalities contributed the largest number, 1,052 or 66.1% of the whole being for the cities, a rate of 32.6 per 1,000 living births. The high rate which is invariably found in city municipalities does not reflect the true status of the morals of city dwellers, and while it is probably true that a higher rate would show in urban centres, the abnormally high rate is due in a large measure to hospitalization, and the fact that women come or are sent to urban centres from rural parts of the Province for their confinement.

MULTIPLE BIRTHS.

There were 784 pairs of twins born during the year, which is the largest number on record. Of these 813 were boys, and 755 girls. Of triplets there were one dozen sets or 36 children, being 25 boys and 11 girls.

MARRIAGES.

There were 24,871 marriages registered during the year, this being a rate of 8.5 marriages for every 1,000 of the population. This was a numerical decrease of 4,233 and a decrease of 1.5 in the rate. The falling off was likely due to the economic conditions of the country. The general commercial depression resulted in a large number of persons being out of employment during the year; this had the usual effect of lowering the marriage rate.

The following table gives a comparison between the years 1920 and 1921:

	1921	Ratio	1920	Rate
Entire Province.....	24,871	8.5	29,104	10.0
Cities.....	14,134	12.2	16,694	14.3
Towns (5,000 population and over).....	1,672	10.7	2,132	12.7
Rural.....	9,065	5.6	10,278	6.5

CONJUGAL RELATIONS, MARRIAGES
(Including all Municipalities.)

	Bachelors	Widowers	Divorced Men	Not stated	Total Brides
Spinsters	20,947	1,657	68	.....	22,672
Widows	1,052	1,032	28	.....	2,112
Divorced Women	49	20	7	.....	76
Not stated	5	2	1	3	11
Total Grooms	22,053	2,711	104	3	24,871

CONJUGAL RELATIONS—MARRIAGES, COUNTIES OF ONTARIO, 1921
(Including Towns and Villages under 5,000.)

	Bachelors	Widowers	Divorced Men	Not stated	Total Brides
Spinsters	7,881	589	11	.....	8,481
Widows	322	364	2	.....	688
Divorced Women	7	3	.....	.....	10
Not stated	.....	.....	.....	.....	.....
Total Grooms	8,210	956	13	.....	9,179

CONJUGAL RELATIONS—MARRIAGES, CITIES OVER 10,000 IN ONTARIO, 1921

	Bachelors	Widowers	Divorced Men	Not stated	Total Brides
Spinsters	11,706	966	52	.....	12,724
Widows	678	593	25	.....	1,296
Divorced Women	41	17	7	.....	65
Not stated	4	1	1	2	8
Total Grooms	12,429	1,577	85	2	14,093

CONJUGAL RELATIONS—MARRIAGES, CITIES AND TOWNS, 5,000—10,000 IN ONTARIO, 1921

	Bachelors	Widowers	Divorced Men	Not stated	Total Brides
Spinsters	1,360	102	5	.....	1,467
Widows	52	75	1	.....	128
Divorced Women	1	.....	.....	1	.....
Not stated	1	1	.....	1	3
Total grooms	1,414	178	6	1	1,599

DEATHS.

There was a total of 34,551 deaths registered during the year. This is a rate of 11.8 per 1,000 of population and is the lowest rate since 1898, when it was 11.5.

The following table shows a comparison with the previous year:

	1921	Ratio	1920	Ratio
Entire Province	34,551	11.8	40,440	13.9
Cities	14,907	12.8	17,473	15.0
Towns	2,273	14.5	3,049	18.1
Rural	17,371	10.8	12,918	12.7

There was a numerical decrease of 5,889, and a decrease of 2.1 in the rate. There were 18,062 male and 16,489 female deaths.

It may be noted that whereas in 1920 the cities contributed considerable more deaths than the rural parts of the province, the situation was reversed in 1921.

The following table shows the ten highest causes of death for a decade.

TEN HIGHEST CAUSES OF DEATH IN EACH YEAR PER 100,000 OF POPULATION.

(For Ten Years.)

	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Apoplexy	39.8	44.8	47.5	51.2	53.5	52.3	53.2	54.7	48.1	53.0
Bright's disease	32.7	40.0	37.2	40.3	36.7	36.0	38.2	32.3	33.8	33.4
Broncho-Pneumonia		19.2	17.9	23.9	31.9	27.9	35.5	25.2	34.0	30.2
Typhoid Fever	19.4									
Cancer	68.9	67.4	69.6	71.6	72.6	79.3	75.5	76.9	85.1	88.2
Disease of the Arteries	44.2	41.7	39.7	44.8	43.4	46.8	52.2	45.7	64.8	62.2
Infantile Diarrhoea	44.4	74.4	44.2	43.0	43.9	23.9	30.1	34.0	53.6	44.9
Paralysis Unspecified	21.2	20.7	20.3	19.0	21.5	19.1				
Influenza							262.2	88.8	113.1	
Pneumonia	63.0	77.4	73.0	84.9	105.6	99.7	166.5	82.9	91.6	72.3
Tuberculosis	87.1	85.6	85.1	89.2	92.2	88.9	90.0	78.0	78.7	73.4
Organic Heart Disease	105.5	105.7	108.1	102.4	120.1	116.0	129.5	114.1	109.5	96 1
Diphtheria										22.2

DEATHS FROM TUBERCULOSIS.

The number of deaths registered for the year from tuberculosis was 2,083, being a ratio per 100,000 of population of 71.0 and is the lowest rate ever recorded in Ontario.

For comparison with 1921 having regard to the class of municipality the following is shown:

	1921		1920	
	Deaths	Ratio	Deaths	Ratio
Province	2,083	71.0	2,280	78.7
Cities	773	66.5	871	74.7
Towns	133	84.9	143	85.7
Rural	1,177	72.9	1,266	81.0

DEATHS IN ONTARIO FROM TUBERCULOSIS BY AGES, 1912-1921.

Year.	Total.	Ratio per 100,000.	Under 5 years.					5-9	10-14	15-19	20-29	30-39	40-49	50-59	60-69	70-79	80 & over.	Not stated.	Total deaths from all causes.
			0-1	1	2	3	4												
	23,466		540	372	253	153	155	479	607	1867	6406	4883	3091	2124	1489	663	122	262	
1912	2,250	87.1	53	30	19	9	15	46	42	154	631	500	304	200	134	64	7	42	32,150
1913	2,294	85.6	52	36	20	10	18	32	41	188	632	479	313	204	156	56	10	47	34,317
1914	2,340	85.1	54	41	20	16	11	56	58	181	688	469	307	214	116	63	12	34	32,440
1915	2,466	89.2	79	39	25	19	16	55	74	168	676	516	273	242	176	73	15	20	33,294
1916	2,559	92.2	66	43	35	19	9	53	61	224	683	536	327	238	156	68	17	24	35,580
1917	2,460	88.9	51	43	26	19	11	45	70	196	664	490	351	240	144	72	18	20	33,284
1918	2,519	90.0	39	35	35	13	27	40	86	242	677	526	323	207	161	66	15	27	43,038
1919	2,215	78.0	44	32	21	12	25	61	54	175	575	459	311	192	155	66	11	22	34,010
1920	2,280	78.7	48	37	24	21	14	52	74	177	602	480	323	195	146	55	9	23	40,440
1921	2,083	71.0	54	36	28	15	9	39	47	162	578	428	259	192	145	80	8	3	34,551

It will be noted in respect to tuberculosis that the cities have the lowest mortality rate. The reason for this is the fact that public health work is more advanced in the cities than in the towns and rural areas, and its good effect in respect to this disease is apparent.

TOTAL NUMBER OF DEATHS FROM TUBERCULOSIS IN EACH COUNTY IN ONTARIO FOR TEN YEARS, 1912-1921.

	Totals	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Totals....	23,466	2,250	2,294	2,340	2,466	2,559	2,460	2,519	2,215	2,280	2,083
Algoma.....	374	33	39	28	34	41	39	46	31	43	40
Brant.....	413	38	32	35	36	40	68	42	49	39	34
Bruce.....	384	36	48	34	42	48	50	36	25	37	28
Carleton.....	1,540	143	178	162	168	161	151	179	130	139	129
Dufferin.....	77	9	4	7	8	9	12	5	9	8	6
Elgin.....	289	26	28	41	33	34	24	24	32	23	24
Essex.....	596	61	54	60	52	44	73	66	72	58	56
Frontenac.....	653	56	58	52	68	72	71	78	68	74	56
Grey.....	347	43	52	31	41	30	31	27	30	42	20
Haldimand....	132	15	13	21	18	13	14	6	11	17	4
Haliburton....	35	5	2	3	3	6	4	6	4	0	2
Halton.....	120	16	6	15	17	12	8	11	9	14	12
Hastings.....	431	53	30	45	48	45	47	43	28	34	58
Huron.....	290	41	27	31	31	23	32	38	23	22	22
Kenora.....	115	7	15	12	7	8	3	15	18	12	18
Kent.....	497	51	52	48	53	63	41	51	47	45	46
Lambton.....	376	30	40	32	45	56	47	39	22	32	33
Lanark.....	277	27	30	33	21	30	26	32	24	25	29
Leeds and Grenville .	666	96	69	59	73	59	60	75	62	48	65
Lennox and Addington..	116	11	16	13	12	8	15	12	8	11	10
Lincoln.....	378	28	36	36	43	39	33	41	41	35	46
Manitoulin....	112	7	4	4	28	10	17	19	6	10	7
Middlesex.....	1,019	95	96	102	95	108	115	104	93	101	110
Muskoka.....	534	47	43	32	46	60	69	58	71	62	46
Nipissing.....	237	42	20	15	33	32	15	12	19	24	25
Norfolk.....	167	14	20	12	25	16	13	25	13	14	15
Northumberland and Durham....	404	44	51	33	51	51	31	43	37	32	31
Ontario.....	284	23	33	24	31	40	35	24	25	24	25
Oxford.....	267	36	32	30	21	38	27	19	16	28	20
Parry Sound...	153	12	17	14	19	11	14	25	11	18	12
Peel.....	113	14	16	12	16	8	11	14	10	8	4
Perth.....	284	35	25	30	23	49	33	17	22	26	24
Peterborough..	312	36	51	36	32	33	33	26	23	27	24
Prescott and Russell.....	577	51	46	60	54	72	65	85	53	53	38
Prince Edward	133	13	16	11	20	16	10	18	14	7	8
Rainy River...	89	7	4	10	8	7	6	9	15	18	5
Renfrew.....	363	33	42	43	46	46	43	18	35	28	29
Simcoe.....	750	65	70	72	78	78	74	80	83	84	66
Stormont, Dundas and Glengarry...	642	58	59	72	61	77	77	63	60	59	56
Sudbury.....	295	18	20	29	32	31	33	39	30	38	25
Temiskaming..	218	..	12	21	24	22	21	32	25	32	29
Thunder Bay..	458	35	47	58	56	48	43	41	37	42	51
Victoria.....	179	13	16	27	17	24	18	25	17	13	9
Waterloo.....	406	46	40	42	45	43	43	33	33	38	43
Welland.....	388	34	43	35	32	38	41	39	58	43	25
Wellington....	367	39	32	44	41	24	37	32	46	35	37
Wentworth....	1,357	112	118	129	112	132	149	165	137	140	163
York.....	5,243	496	492	545	567	604	538	582	483	518	418

CANCER.

The number of deaths was 2,585 being a ratio per 100,000 of population of 88.6. This is the highest rate ever reached by this disease.

The following table classifies by number of deaths, rate and part affected.

	1912		1913		1914		1915		1916		1917		1918		1919		1920		1921	
Buccal cavity.	150	5.8	94	3.5	113	4.1	114	4.1	73	2.6	97	3.5	77	2.7	82	2.8	117	4.0	98	3.3
Stomach.....	570	22.7	631	23.5	628	22.8	665	24.0	659	23.7	701	25.3	647	23.1	623	21.9	782	27.0	860	29.3
Peritoneum...	258	9.9	263	9.8	271	9.8	258	9.3	258	9.2	283	10.2	281	10.0	305	10.7	396	13.6	391	13.0
Female genital Organs.....	159	6.1	177	6.6	144	5.2	131	4.7	149	5.3	154	5.5	148	5.3	181	6.3	234	8.0	236	8.0
Breast.....	116	4.4	126	4.7	126	4.5	106	3.8	136	4.9	121	4.3	129	4.6	128	4.5	198	6.8	235	8.0
Skin.....	11	.42	26	.97	25	.99	31	1.1	46	1.6	69	2.4	71	2.5	58	2.0	49	1.7	66	2.2
Unspecified...	514	19.9	489	18.2	565	20.5	677	24.4	691	24.8	771	27.8	750	26.8	805	28.3	688	23.7	699	24.1
Total.....	1778	68.9	1806	67.4	1872	69.6	1982	71.6	2012	72.6	2196	79.3	2103	75.5	2182	76.9	2464	85.0	2585	88.0

The increase in cancer is a serious one and as remarked in former reports, the chief means of combating this increase is by the education of the public in knowledge which will lead to early recognition of the disease in order that treatment may be applied when it will have the best chance of success. The Provincial Board of Health and other agencies have spread, through pamphlets, newspaper articles and exhibits, a great deal of useful information on this and other public health topics.

INFANT MORTALITY.

The number of children who died before completing twelve months of age was 6,763, which is a rate of 91.3 per 1,000 living births and is the lowest rate ever recorded in the province.

In Table 13 will be found deaths under one year of age by city, town and rural municipalities.

The following table shows the Infant Mortality rate for a decade:

Year	Number	Ratio per 1,000 living births
1912	6,494	110.3
1913	7,596	117.6
1914	6,835	103.2
1915	6,838	102.0
1916	7,000	107.2
1917	5,777	92.1
1918	6,402	99.0
1919	5,999	95.5
1920	7,802	107.5
1921	6,763	91.3
Mean rate		102.5

See tables 13 and following for detailed information.

Deaths from Communicable Diseases.

Deaths and Rate per 1,000 of Population.

	1912		1913		1914		1915		1916	
Typhoid fever	483	19.4	446	16.6	358	13.8	298	10.7	335	12.6
Smallpox	2	.07	2	.07	1	.03	2	.09	5	.18
Measles	111	4.2	166	6.1	61	2.2	145	5.2	411	14.8
Scarlet fever	152	5.8	137	5.1	111	4.0	42	1.5	49	1.7
Whooping cough	419	16.2	272	10.1	196	7.1	193	6.9	341	12.2
Diphtheria and croup	371	14.3	339	12.6	443	16.1	341	12.3	461	16.6
Influenza	222	8.5	249	9.2	128	4.6	267	9.6	495	17.4

	1917		1918		1919		1920		1921	
Typhoid fever	252	9.0	208	7.4	145	5.1	203	7.0	213	7.2
Smallpox	1	.04	2	.07	5	.17	33	1.1	24	.8
Measles	58	2.09	95	3.3	31	1.3	303	10.4	54	1.8
Scarlet fever	59	2.1	84	3.0	96	3.3	170	5.8	144	4.9
Whooping cough	228	8.5	303	10.8	164	5.7	376	12.9	310	10.5
Diphtheria and croup	396	14.2	335	11.9	475	16.7	745	25.7	653	22.2
Influenza	221	7.9	7,337	262.1	2,522	88.8	3,276	113.1	509	17.3

The following list of Causes of Deaths is the Third Edition of the International List and was issued by the Commission at Paris in October, 1914.

It may be noted that it is somewhat more elaborate than the former list, and while maintaining the same general classification it has made each class more comprehensive.

INTERNATIONAL LIST OF CAUSES OF SICKNESS AND DEATH.

(Third decennial revision by the International Commission, Paris, Oct. 11-14, 1920.)

I. Epidemic, Endemic and Infectious Diseases.

1. Typhoid and paratyphoid fever.
   (*a*) Typhoid fever.
   (*b*) Paratyphoid fever.
2. Typhus fever.
3. Relapsing fever (spirillum obermeieri).
4. Malta fever.
5. Malaria.
6. Smallpox.
7. Measles.
8. Scarlet fever.
9. Whooping cough.
10. Diphtheria.

11. Influenza.
    (*a*) With pulmonary complications specified.
    (*b*) Without pulmonary complications specified.
12. Miliary fever.
13. Mumps.
14. Asiatic cholera.
15. Cholera nostras.
16. Dysentery.
    (*a*) Amoebic.
    (*b*) Bacillary.
    (*c*) Unspecified or due to other causes.
17. Plague.
    (*a*) Bubonic.
    (*b*) Pneumonic.
    (*c*) Septicaemic.
    (*d*) Unspecified.
18. Yellow fever.
19. Spirochetal haemorrhagic jaundice.
20. Leprosy.
21. Erysipelas.
22. Acute poliomyelitis.
23. Lethargic encephalitis.
24. Meningococcus meningitis.
25. Other epidemic and endemic diseases.
    (*a*) Chickenpox.*
    (*b*) German measles.*
    (*c*) Other under this title.*
26. Glanders.
27. Anthrax.
28. Rabies.
29. Tetanus.
30. Mycoses.
31. Tuberculosis of the respiratory system.
32. Tuberculosis of the meninges and central nervous system.
33. Tuberculosis of the intestines and peritoneum.
34. Tuberculosis of the vertebral column.
35. Tuberculosis of the joints.
36. Tuberculosis of other organs.
    (*a*) Tuberculosis of the skin and subcutaneous cellular tissue.
    (*b*) Tuberculosis of the bones (vertebral column excepted).
    (*c*) Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted).
    (*d*) Tuberculosis of the genito-urinary system.
    (*e*) Tuberculosis of organs other than the above.
37. Disseminated tuberculosis.
    (*a*) Acute.
    (*b*) Chronic.
38. Syphilis.
39. Soft chancre.
40. Gonococcus infection.
41. Purulent infection, septicaemia.
42. Other infectious diseases.

II. General Diseases Not Included Above.

43. Cancer and other malignant tumors of the buccal cavity.
44. Cancer and other malignant tumors of the stomach and liver.
45. Cancer and other malignant tumors of the peritoneum, intestines and rectum.
46. Cancer and other malignant tumors of the female genital organs.
47. Cancer and other malignant tumors of the breast.
48. Cancer and other malignant tumors of the skin.
49. Cancer and other malignant tumors of other or unspecified organs.
50. Benign tumors and tumors not returned as malignant (tumors of the female genital organs excepted).
51. Acute rheumatic fever.
52. Chronic rheumatism, osteo-arthritis, gout.
53. Scurvy.
54. Pellagra.
55. Beriberi.
56. Rickets.
57. Diabetes mellitus.
58. Anaemia, chlorosis.
    (*a*) Pernicious anaemia.
    (*b*) Other anaemias and chlorosis.
59. Diseases of the pituitary gland.
60. Diseases of the thyroid gland.
    (*a*) Exophthalmic goitre.
    (*b*) Other diseases of the thyroid gland.
61. Diseases of the parathyroid glands.
62. Diseases of the thymus gland.
63. Diseases of the adrenals (Addison's disease).
64. Diseases of the spleen.
65. Leukaemia and Hodgkin's disease.
    (*a*) Leukaemia.
    (*b*) Hodgkin's disease.
66. Alcoholism (acute or chronic).
67. Chronic poisoning by mineral substances.
    (*a*) Chronic lead poisoning.*
    (*b*) Others under this title.*
68. Chronic poisoning by organic substances.
69. Other general diseases.

III. Diseases of the Nervous System and of the Organs of Special Sense.

70. Encephalitis.
71. Meningitis (does not include meningitis specified as meningococcic, tuberculous, rheumatic, etc.).
    (*a*) Simple meningitis.*
    (*b*) Non-epidemic cerebro-spinal meningitis.
72. Tabes dorsalis (locomotor ataxia).
73. Other diseases of the spinal cord.
74. Cerebral haemorrhage, apoplexy.
    (*a*) Cerebral haemorrhage.
    (*b*) Cerebral thrombosis and embolism.

75. Paralysis without specified cause.
    (*a*) Hemiplegia.
    (*b*) Others under this title.
76. General paralysis of the insane.
77. Other forms of mental alienation.
78. Epilepsy.
79. Convulsions (non-puerperal) (5 years and over).
80. Infantile convulsions (under 5 years of age).
81. Chorea.
82. Neuralgia and neuritis.
83. Softening of the brain.
84. Other diseases of the nervous system.
85. Diseases of the eye and annexa.
86. Diseases of the ear and of the mastoid process.
    (*a*) Diseases of the ear.*
    (*b*) Diseases of the mastoid process.*

IV. Diseases of the Circulatory System.

87. Pericarditis.
88. Endocarditis and myocarditis (acute).
89. Angina pectoris.
90. Other diseases of the heart.
91. Diseases of the arteries.
    (*a*) Aneurysm.
    (*b*) Arteriosclerosis.
    (*c*) Other diseases of the arteries.
92. Embolism and thrombosis (not cerebral).
93. Diseases of the veins (varices, hemorrhoids, phlebitis, etc.).
94. Diseases of the lymphatic system (lymphangitis, etc.).
95. Hemorrhage without specified cause.
96. Other diseases of the circulatory system.

V. Diseases of the Respiratory System.

97. Diseases of the nasal fossae and their annexa.
    (*a*) Diseases of the nasal fossae.*
    (*b*) Others under this title.*
98. Diseases of the larynx.
99. Bronchitis.
    (*a*) Bronchitis, acute.
    (*b*) Bronchitis, chronic.
    (*c*) Bronchitis, not otherwise defined, under 5 years of age.
    (*d*) Bronchitis, not otherwise defined, 5 years and over.
100. Broncho-pneumonia (including capillary bronchitis).
    (*a*) Broncho-pneumonia.
    (*b*) Capillary bronchitis.*
101. Pneumonia.
    (*a*) Pneumonia, lobar.
    (*b*) Pneumonia, not otherwise defined.
102. Pleurisy.

103. Congestion and hemorrhagic infarct of the lung.
104. Gangrene of the lung.
105. Asthma.
106. Pulmonary emphysema.
107. Other diseases of the respiratory system (tuberculosis excepted).
    (*a*) Chronic interstitial pneumonia, including occupational diseases of the lung.
    (*b*) Diseases of the mediastinum.
    (*c*) Others under this title.

VI. Diseases of the Digestive System.

108. Diseases of the mouth and annexa.
109. Diseases of the pharynx and tonsils (including adenoid vegetations).
    (*a*) Adenoid vegetations.*
    (*b*) Others under this title.*
110. Diseases of the oesophagus.
111. Ulcer of the stomach and duodenum.
    (*a*) Ulcer of the stomach.
    (*b*) Ulcer of the duodenum.
112. Other diseases of the stomach (cancer excepted).
113. Diarrhoea and enteritis (under 2 years of age).
114. Diarrhoea and enteritis (2 years and over).
115. Ankylostomiasis.
116. Diseases due to other intestinal parasites.
    (*a*) Cestodes (hydatids of the liver excepted).
    (*b*) Trematodes.
    (*c*) Nematodes (other than ankylostoma).
    (*d*) Coccidia.
    (*e*) Other parasites specified.
    (*f*) Parasites not specified.
117. Appendicitis and typhlitis.
118. Hernia, intestinal obstruction.
    (*a*) Hernia.
    (*b*) Intestinal obstruction.
119. Other diseases of the intestines.
120. Acute yellow atrophy of the liver.
121. Hydatid tumor of the liver.
122. Cirrhosis of the liver.
    (*a*) Cirrhosis, specified as alcoholic.
    (*b*) Cirrhosis, not specified as alcoholic.
123. Biliary calculi.
124. Other diseases of the liver.
125. Diseases of the pancreas.
126. Peritonitis without specified cause.
127. Other diseases of the digestive system (cancer and tuberculosis excepted).

VII.—Non-Venereal Diseases of the Genito-Urinary System and Annexa.

128. Acute nephritis (including unspecified, under 10 years of age).
129. Chronic nephritis (including unspecified, 10 years and over).

130. Chyluria.
131. Other diseases of the kidneys and annexa (diseases of the kidneys in pregnancy excepted).
132. Calculi of the urinary passages.
133. Diseases of the bladder.
134. Diseases of the urethra, urinary abscess, etc.
    (*a*) Stricture of the urethra.
    (*b*) Others under this title.
135. Diseases of the prostate.
136. Non-venereal diseases of the male genital organs.
137. Cysts and other benign tumors of the ovary.
138. Salpingitis and pelvic abscess.
139. Benign tumors of the uterus.
140. Non-puerperal uterine hemorrhage.
141. Other diseases of the female genital organs.
142. Non-puerperal diseases of the breast (cancer excepted).

VIII.—The Puerperal State.

143. Accidents of pregnancy.
    (*a*) Abortion.
    (*b*) Ectopic gestation.
    (*c*) Others under this title.
144. Puerperal hemorrhage.
145. Other accidents of labour.
    (*a*) *Caesarean section.
    (*b*) *Other surgical operations and instrumental delivery.
    (*c*) *Others under this title.
146. Puerperal septicaemia.
147. Puerperal phlegmasia alba dolens, embolus, sudden death.
148. Puerperal albuminuria and convulsions.
149. Following childbirth (not otherwise defined).
150. Puerperal diseases of the breast.

IX. Diseases of the Skin and of the Cellular Tissue.

151. Gangrene.
152. Furuncle.
153. Acute abscess.
154. Other diseases of the skin and annexa.

X. Diseases of the Bones and of the Organs of Locomotion.

155. Diseases of the bones (tuberculosis excepted).
156. Diseases of the joints (tuberculosis and rheumatism excepted).
157. Amputations.
158. Other diseases of the organs of locomotion.

XI. Malformations.

159. Congenital malformations (still-births not included).
    (*a*) *Hydrocephalus.
    (*b*) *Congenital malformations of the heart.
    (*c*) *Others under this title.

XII. Early Infancy.

160. Congenital debility, icterus, and sclerema.
161. Premature birth; injury at birth.
    (*a*) *Premature birth.
    (*b*) *Injury at birth.
162. Other diseases peculiar to early infancy.
163. Lack of care.

XIII. Old Age.

164. Senility.

XIV. External Causes.

165. Suicide by solid or liquid poisons (corrosive substances excepted).
166. Suicide by corrosive substances.
167. Suicide by poisonous gas.
168. Suicide by hanging or strangulation.
169. Suicide by drowning.
170. Suicide by firearms.
171. Suicide by cutting or piercing instruments.
172. Suicide by jumping from high places.
173. Suicide by crushing.
174. Other suicides.
175. Poisoning by food.
176. Poisoning by venomous animals.
177. Other acute accidental poisonings (gas excepted).
178. Conflagration.
179. Accidental burns (conflagration excepted).
180. Accidental mechanical suffocation.
181. Accidental absorption of irrespirable or poisonous gas.
182. Accidental drowning.
183. Accidental traumatism by firearms (wounds of war excepted).
184. Accidental traumatism by cutting or piercing instruments.
185. Accidental traumatism by fall.
186. Accidental traumatism in mines and quarries.
    (*a*) *Mines.
    (*b*) *Quarries.
187. Accidental traumatism by machines.
188. Accidental traumatism by other crushing (vehicles, railways, landslides, etc.).
    (*a*) *Railroad accidents.
    (*b*) *Street car accidents.
    (*c*) *Automobile accidents.
    (*d*) *Aeroplane and balloon accidents.
    (*e*) *Injuries by other vehicles.
    (*f*) *Landslides, other crushing.
189. Injuries by animals (not poisoning).
190. Wounds of war.
191. Execution of civilians by belligerent armies.
192. Starvation (deprivation of food or water).
193. Excessive cold.

194. Excessive heat.
195. Lightning.
196. Other accidental electric shocks.
197. Homicide by firearms.
198. Homicide by cutting or piercing instruments.
199. Homicide by other means.
200. Infanticide (murder of infants less than one year of age).†.
201. Fracture (cause not specified).
202. Other external violence (cause specified).
203. Other external violence (cause not specified).

XV. Ill-Defined Diseases.

204. Sudden death.
205. Cause of death not specified or ill-defined.
    (*a*) *Ill-defined.
    (*b*) *Not specified or unknown.

†This title to be omitted when homicides are shown by ages under Titles 197-199).

TABLE No. 1.

Showing the number of Births, Marriages and Deaths, and the ratio per 1,000 of population in each County (excluding Cities and Towns), 1921.

Counties.	Census Population	Births excluding Still-births	Ratio per 1,000	Marriages.	Ratio per 1,000	Deaths excluding Still-births.	Ratio per 1,000
Total, including all municipalities	2,933,662	74,152	25.28	24,871	8.48	34,551	11.78
Total, excluding cities and towns	1,614,032	37,016	22.93	9,065	5.61	17,371	10.76
Algoma	24,480	636*	25.98	103	4 21	259	10.58
Brant	23,937	419	17.50	96	4.01	202	8.43
Bruce	44,285	916	20.68	273	6.16	501	11.21
Carleton	35,538	779	21.92	164	4.61	330	9.28
Dufferin	15,415	346	22.44	89	5.77	189	12.26
Elgin	28,958	511	17.64	140	4.83	359	11.29
Essex	51,055	1,483	29.04	332	6.50	515	10.08
Frontenac	22,741	443	19.48	90	3.95	241	10.59
Grey	46,861	958	20.44	264	5.63	464	9.90
Haldimand	21,287	415	19.49	132	6.20	194	9.11
Haliburton	6,209	170	27.37	24	3.86	137	22.06
Halton	24,899	516	20.72	134	5.38	240	9.63
Hastings	39,415	1,046	26.53	241	6.11	448	11.36
Huron	47,088	933	19.81	285	6.05	527	11.19
Kenora	14,252	253	17.75	32	2.24	86	6.03
Kent	45,470	1,144	25.15	290	6.37	505	11.10
Lambton	37,225	787	21.14	204	5.48	480	12.89
Lanark	26,203	519	19.80	163	6.22	355	13.54
Leeds and Grenville	41,510	800	19.27	240	5.78	600	14.45
Lennox and Addington	18,994	390	20.53	135	7.10	186	9.79
Lincoln	28,744	517	17.98	126	4.38	293	10.19
Manitoulin	10,468	271	25.88	74	7.06	119	11.36
Middlesex	45,906	842	18.34	241	5.24	558	12.15
Muskoka	19,439	472	24.28	152	7.81	208	10.70
Nipissing	23,851	881	36.93	166	6.95	289	12.11
Norfolk	26,366	564	21.39	191	7.24	330	12.51
Northumberland & Durham	50,587	1,051	20.77	346	6.83	623	12.31
Ontario	34,554	680	19.67	200	5.78	418	12.09
Oxford	31,677	612	19.32	157	4.95	288	9.09
Parry Sound	27,022	774	28.64	196	7.25	267	9.88
Peel	23,896	450	18.83	134	5.60	231	9.66
Perth	34,749	751	21.61	216	6.21	369	10.61
Peterboro	21,267	446	20.97	96	4.51	226	10.62
Prescott and Russell	42,055	1,500	35.66	254	6.03	430	10.22
Prince Edward	16,806	333	19.81	117	6.96	230	13.68
Rainy River	13,541	357	26.36	78	5.76	123	9.08
Renfrew	43,630	1,176	26.95	291	6.66	430	9.85
Simcoe	55,424	1,197	21.59	321	5.79	600	10.82
Stormont, Dundas & Glengarry	55,542	1,291	23.24	321	5.77	647	11.64
Sudbury	34,559	994	28.76	162	4.68	217	6.27
Thunder Bay	14,334	190	13.25	29	1.01	172	11.99
Timiskaming	50,176	1,664	33.16	385	7.67	479	9.55
Victoria	20,166	408	20.23	102	5.05	220	10.90
Waterloo	28,981	650	22.42	141	4.86	299	10.31
Welland	43,250	1,033	23.88	307	7.09	441	10.19
Wellington	36,032	777	11.46	193	5.35	426	11.82
Wentworth	39,416	653	16.56	150	3.80	442	11.21
York	125,772	3,018	23.99	488	3.88	1,178	9.36

TABLE No. 2.

Showing the total number of Births, Marriages and Deaths, and the ratio per 1,000 of population in each City of Ontario, 1921.

Cities.	Census Population.	Births excluding Still-births.	Ratio per 1,000.	Marriages.	Ratio per 1,000.	Deaths excluding Still-births.	Ratio per 1,000.
Totals	1,163,113	32,260	27.73	14,134	12.15	14,907	12.81
Belleville	12,206	365	29.90	159	13.02	206	16.87
Brantford	29,440	858	29.14	329	11.17	338	11.48
Chatham	13,256	391	29.49	212	15.99	231	17.42
Fort William	20,541	695	33.83	204	9.93	255	12.41
Galt	13,216	359	27.16	125	9.45	158	11.95
Guelph	18,128	424	23.38	226	12.46	316	17.43
Hamilton	114,151	3,498	30.64	1,354	11.86	1,459	12.78
Kingston	21,753	648	29.78	262	12.04	430	19.76
Kitchener	21,763	611	28.07	247	11.34	261	11.99
London	60,959	1,458	23.91	672	11.02	974	15.97
Niagara Falls	14,764	447	30.27	383	25.94	172	11.64
Ottawa	107,843	3,250	30.13	1,149	10.65	1,644	15.24
Owen Sound	12,190	332	27.23	109	8.94	185	14.16
Peterborough	20,994	554	26.38	260	12.38	273	13.00
Port Arthur	14,886	518	34.79	165	11.08	197	13.23
St. Catharines	19,881	710	35.71	259	13.02	298	14.98
St. Thomas	16,026	385	24.02	170	10.60	223	13.91
Sarnia	14,877	379	25.47	166	11.15	181	12.16
Sault Ste Marie	21,092	706	33.47	245	11.61	265	12.56
Stratford	16,094	458	28.45	200	12.42	231	14.35
Toronto	521,893	13,378	25.63	6,309	12.08	5,884	11.27
Welland	8,654	264	30.50	148	17.10	112	12.94
Windsor	38,591	1,326	34.36	653	16.92	465	12.04
Woodstock	9,935	246	24.76	128	12.88	149	14.99

TABLE No. 3.

Showing the total number of Births, Marriages and Deaths, in the Towns of 5,000 population in Ontario, together with the ratio per 1,000 of population, 1921.

Towns.	Census Population.	Births excluding Still-births.	Ratio per 1,000.	Marriages.	Ratio per 1,000.	Deaths excluding Still-births	Ratio per 1,000.
Totals	156,497	4,876	31.15	1,672	10.68	2,273	14.52
Barrie	6,936	190	27.39	67	9.65	119	17.15
Brockville	10,043	258	25.68	114	11.35	177	17.62
Cobourg	5,327	116	21.77	54	10.13	116	21.77
Collingwood	5,882	130	22.10	63	10.71	92	15.64
Cornwall	7,419	321	43.26	103	13.88	175	23.58
Eastview	5,324	105	19.72	18	3.37	41	7.70
Ford City	5,870	186	31.68	40	6.81	56	9.54
Hawkesbury	5,544	258	46.53	42	7.57	80	14.43
Ingersoll	5,150	135	26.21	54	10.48	89	17.27
Kenora	5,407	156	28.85	66	12.20	52	9.61
Lindsay	7,620	203	26.64	111	14.56	116	15.22
Midland	7,016	228	32.49	61	8.69	93	13.25
North Bay	10,692	417	39.00	124	11.59	130	12.15
Orillia	8,774	249	17.27	93	10.59	127	14.47
Oshawa	11,940	409	34.25	111	9.29	154	12.89
Pembroke	7,875	298	37.84	80	10.15	119	15.11
Preston	5,423	141	26.00	45	8.29	43	6.81
Smith's Falls	6,790	196	28.76	63	9.27	130	19.14
Sudbury	8,621	416	48.25	112	12.99	166	19.25
Trenton	5,902	142	24.05	78	13.21	68	11.52
Walkerville	7,059	158	22.38	115	16.29	54	7.64
Waterloo	5,883	164	27.87	58	9.85	76	12.91

TABLE No. 4.—Births and birth rate per 1,000 of census population, 1902-1921 inclusive.

1902	2,216,980	46,973	21.0	1912	2,564,313	58,870	22.9
1903	2,251,012	47,709	21.1	1913	2,605,352	64,516	22.7
1904	2,285,045	49,158	21.5	1914	2,646,390	66,225	25.0
1905	2,319,078	50,808	21.9	1915	2,687,429	67,032	24.9
1906	2,353,110	50,621	21.5	1916	2,728,468	65,264	23.9
1907	2,387,143	52,289	21.9	1917	2,769,507	62,666	22.6
1908	2,421,176	54,878	22.6	1918	2,810,546	64,729	23.0
1909	2,455,208	54,448	21.7	1919	2,851,584	62,774	22.0
1910	2,489,241	55,755	22.4	1920	2,892,623	72,511	25.1
1911	2,523,274	56,096	22.2	1921	2,933,662	74,152	25.3

TABLE No. 5.—Marriages and marriage rate per 1,000 of census population, 1902-1921 inclusive.

1902	2,216,980	18,072	8.1	1912	2,564,313	28,845	11.2
1903	2,251,012	19,830	8.8	1913	2,605,352	26,998	10.3
1904	2,285,045	19,789	8.6	1914	2,646,390	24.245	9.1
1905	2,319,078	20,426	8.8	1915	2,687,429	23,506	8.7
1906	2,353,110	19,845	8.4	1916	2,728,468	23,401	8.5
1907	2,387,143	21,915	9.1	1917	2,769,507	21,499	7.7
1908	2,421,176	21,058	8.6	1918	2,810,546	19,525	6.9
1909	2,455,208	22,366	9.1	1919	2,851,584	26,328	9.2
1910	2,489,241	24,036	9.6	1920	2,892,623	29,104	10.0
1911	2,523,274	25,807	10.2	1921	2,933,662	24,871	8.5

TABLE No. 6.—Deaths and death rate per 1,000 of census population 1902-1921 inclusive.

1902	2,216,980	26,713	12.0	1912	2,564,313	32,150	12.5
1903	2,251,012	28,399	12.6	1913	2,605,352	34,317	13.1
1904	2,285,945	29,600	12.9	1914	2,646,390	32,440	12.2
1905	2,319,078	29,748	12.8	1915	2,687,429	33,294	12.3
1906	2,353,110	31,244	13.2	1916	2,728,468	35,580	13.0
1907	2,387,143	13,756	13.3	1917	2,769,507	33,284	12.0
1908	2,421,176	30,947	12.7	1918	2,810,546	43,038	15.3
1909	2,455,208	30,792	12.5	1919	2,851,584	34,010	11.9
1910	2,489,241	31,332	12.5	1920	2,892,623	40,440	14.0
1911	2,523,274	31,878	12.6	1921	2,933,662	34,551	11.8

TABLE No. 7.

Recapitulation of Causes of Death by Classes of Diseases in Counties, 1921.

Causes of Death by Classes of Diseases.	Total.	Ages.																Sex.			Months.											
		Under 0-1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29	30-39	40-49.	50-59	60-69	70-79..	80 and over	Not stated.	Male.	Female	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Grand Total including all municipalities	**34,551**	**6,763**	**827**	**390**	**291**	**282**	**928**	**529**	**700**	**1,878**	**2,103**	**2,301**	**31,51**	**4,539**	**5,533**	**4,281**	**55**	**18,062**	**16,489**		**3,178**	**3,089**	**3,298**	**3,005**	**2,861**	**2,378**	**2,704**	**2,838**	**2,905**	**2,811**	**2,651**	**2,833**
Grand Total excluding cities and towns	17371	3225	365	198	137	130	413	276	340	934	872	874	1415	2241	3182	2727	42	9145	8226	..	1572	1595	1617	1571	1423	1210	1362	1438	1455	1437	1330	1361
I. Endemic, Epidemic and Infectious Diseases	2,405	280	83	67	68	48	187	93	120	415	301	188	176	155	150	70	4	1224	1181	..	211	249	255	213	189	146	164	232	196	216	180	154
II. General diseases	1,974	26	9	6	3	5	26	25	21	46	77	192	365	518	461	192	2	893	1081	..	148	163	171	196	158	165	152	147	186	170	174	144
III. Diseases of the nervous system	1,694	153	29	14	8	9	26	18	23	53	58	94	172	297	433	305	2	839	855	..	132	129	149	147	179	126	149	149	127	132	114	161
IV. Diseases of the circulatory system	2,830	24	6	2	...	1	13	18	21	43	69	90	273	549	996	722	3	1495	1335	..	260	248	234	272	266	226	203	221	185	241	237	237
V. Diseases of the respiratory system	1,915	413	80	29	15	21	40	20	26	52	79	82	131	230	390	300	7	1043	872	..	261	282	286	222	151	94	66	49	74	113	141	176
VI. Diseases of the digestive system	1,545	587	99	40	21	21	51	42	21	43	46	40	92	140	170	128	4	804	741	..	104	87	82	95	72	71	131	217	310	166	117	93
VII. Non-venereal diseases of the genito-urinary system and its annexa	826	15	4	7	1	4	7	8	7	34	42	49	78	160	226	181	3	481	345	..	78	63	92	83	65	48	63	64	62	66	67	75
VIII. The puerperal state	172	...	...	...	...	...	...	...	8	67	78	19	...	...	...	...	...	...	172	..	12	14	18	23	14	12	14	13	15	11	12	14
IX. Diseases of the skin and cellular tissue	87	7	...	1	...	...	...	1	1	2	...	2	6	7	23	36	1	50	37	..	10	9	5	8	11	6	6	8	7	4	6	7
X. Diseases of the bones and organs of locomotion	19	...	...	...	...	...	1	4	...	1	1	...	...	8	3	1	..	11	8	..	...	1	2	3	3	...	2	3	1	1	...	...
XI. Malformations	247	234	8	3	...	...	1	..	1	...	...	...	...	...	...	...	...	126	121	..	16	26	25	22	25	19	12	18	26	23	15	20
XII. Diseases of early infancy	1,343	1343	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	760	583	..	107	110	128	116	109	101	122	111	128	112	92	107
XIII. Old age	888	...	...	...	...	...	...	...	...	...	...	...	...	16	199	673	..	411	477	..	124	108	69	65	63	66	60	62	57	80	67	67
XIV. External causes	1,073	37	31	24	18	18	56	42	87	170	105	97	97	86	98	99	8	799	274	..	70	70	71	76	90	105	187	114	61	76	84	69
XV. Ill-defined diseases	353	106	16	5	3	3	5	5	4	8	16	21	25	75	33	20	8	209	144	..	39	36	30	29	28	26	27	34	20	26	25	33

TABLE No. 8.

Recapitulation of Causes of Death by Classes of Diseases in Cities, 1921.

Causes of Death by Classes of Diseases	Total	Ages.														Sex.			Months.											
		Under 0-1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Grand Total ..	14,907	3,043	401	169	133	137	446	218	302	821	1,087	1,282	1,532	1,998	2,004	1,321	12	7,729	7,178		1,386	1,306	1,506	1,233	1,240	994	1,173	1,214	1,251	1,183	1,131	1,290
I. Endemic, Epidemic and Infectious diseases	1,918	253	104	86	54	51	187	65	95	284	248	187	114	106	50	32		962	956		175	200	225	158	162	132	118	155	149	149	135	163
II. General diseases	1,911	26	8	8	2	10	28	26	26	80	132	284	406	498	321	89		838	1073		162	146	187	154	156	144	178	155	152	155	170	185
III. Diseases of the nervous system	1,339	143	25	11	6	9	43	16	19	38	66	148	188	248	264	137	2	685	651		108	99	128	108	127	102	99	113	102	123	89	141
IV. Diseases of the circulatory system	2,252	20	5	3	5	4	20	27	28	71	109	157	320	535	590	358		1131	1121		214	192	245	198	209	144	160	140	157	194	191	208
V. Diseases of the respiratory system	1,798	357	108	28	17	17	27	12	22	74	120	144	159	248	277	186	2	940	858		230	231	289	199	146	93	62	63	89	101	134	161
VI. Diseases of the digestive system	1,597	598	107	17	22	23	53	35	29	80	98	118	130	120	105	64	1	864	733		102	101	107	90	103	112	155	260	256	136	92	83
VII. Non-venereal diseases of the genito-urinary system and adnexa	786	19	3	4	1	2	8	4	22	55	83	89	107	138	169	80	2	440	346		76	71	81	67	61	49	56	55	66	72	71	61
VIII. Puerperal state	189	.	.	.	.	.	.	.	13	67	83	26	.	.	.	.	.	.	189		16	15	11	19	18	15	21	14	16	14	15	15
IX. Diseases of the skin and cellular tissue	90	17	1	.	1	.	.	.	3	4	4	10	8	9	17	16	.	57	33		5	12	10	7	8	8	12	4	6	6	7	5
X. Diseases of the bones and organs of locomotion	38	4	1	.	2	1	3	3	4	2	3	2	1	3	4	3	.	20	18	.	2	3	2	4	4	3	1	4	6	.	3	6
XI. Malformations	213	204	5	.	.	.	2	1	.	.	.	.	.	.	.	.	.	128	84	.	23	15	18	18	20	11	21	15	21	11	15	21
XII. Diseases of early infancy	1,341	1341	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	792	549	.	133	114	124	115	99	79	112	117	108	112	113	115
XIII. Old age	421	.	.	.	.	.	.	.	.	.	.	.	.	7	138	276	.	186	235	.	59	47	41	34	34	21	21	26	23	33	32	45
XIV. External causes	834	23	21	15	20	20	72	29	40	86	129	101	89	52	62	74	1	598	236		63	49	57	49	73	66	149	76	82	67	46	57
XV. Ill-defined diseases	184	39	11	.	3	.	1	.	1	10	12	16	40	34	7	6	4	88	96	.	18	11	11	16	20	15	14	17	10	10	18	24

TABLE No. 9.

Recapitulation of Causes of Death by Classes of Diseases in Towns of 5,000 population, 1921.

Causes of Death by Classes of Diseases.	Total.	Ages.															Sex.			Months.											
		Under 0 1	1.	2	3	4	5-9.	10-14	15-19	20-29	30-39	40-49	50-59	60-69	70-79	80 and over.	Not stated	Male.	Female.	Not stated	January.	February	March.	April.	May.	June	July.	August.	September	October.	November.	December
Grand Total	2,273	494	61	23	21	15	69	35	58	123	144	145	204	300	347	233	1	1,188	1,085		220	188	175	202	198	173	173	182	199	191	189	183
I. Epidemic, endemic and infectious diseases	319	29	15	10	9	3	32	13	16	35	44	33	23	16	14	6	..	156	163		31	25	25	31	20	20	21	26	28	25	25	25
II. General diseases	264	11	..	1	1	..	3	3	4	4	10	20	18	37	62	79	..	125	139		15	27	19	21	27	27	18	21	24	23	21	22
III. Diseases of the nervous system	248	21	9	2	3	1	4	1	6	5	11	1	30	42	53	32	..	124	124		23	18	20	15	24	21	19	17	22	23	19	22
IV. Diseases of the circulatory system	278	1	1	1	1	..	2	2	5	8	8	15	32	53	87	59	..	147	131		23	27	18	29	30	20	17	15	18	24	38	22
V. Diseases of the respiratory system	330	33	14	4	2	1	2	1	6	5	9	12	19	33	43	25	1	117	177		39	38	27	28	17	17	7	8	9	16	15	19
VI. Diseases of the digestive system	272	108	19	5	5	5	12	6	8	14	15	14	12	24	18	11	..	140	132		19	22	16	6	17	14	30	32	32	19	20	20
VII. Non-venereal diseases of the genito-urinary system and its annexa	103	1	..	..	..	..	4	..	2	5	9	10	16	24	23	14	..	60	43		11	6	7	9	11	10	7	5	11	12	8	6
VIII. Diseases puerperal state	26	..	..	..	..	..	..	..	1	10	13	2	..	..	..	..	..	2	26		1	2	3	6	..	3	..	2	1	2	4	2
IX. Diseases of the skin and cellular tissue	5	1	..	..	..	..	..	..	..	1	..	..	..	..	..	3	..	4	1		..	..	2	..	..	2	..	..	..	..	1	..
X. Diseases of the bones and organs of locomotion	11	1	..	..	1	..	1	1	..	..	..	..	1	..	..	..	..	4	7		..	..	1	..	..	1	..	..	..	1	1	..
XI. Malformations	34	32	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	23	11		6	3	4	5	..	2	1	3	..	..	..	..
XII. Diseases of early infancy	224	224	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	134	90		22	18	20	29	23	14	15	21	20	15	11	16
XIII. Old age	95	..	..	..	..	..	..	..	..	..	..	..	..	2	24	69	..	35	60		11	8	3	2	13	4	5	7	2	8	7	11
XIV. External causes	136	7	1	..	..	3	10	4	9	17	22	11	7	18	12	4	..	102	33		12	8	9	13	11	16	14	13	7	4	6	13
XV. Ill-defined and unknown	51	3	1	..	..	..	..	..	1	1	3	4	4	9	3	..	..	18	16		3	1	2	3	3	..	1	2	1	1	3	3

TABLE

Showing Total Deaths by Individual

OFFICIAL ENGLISH TRANSLATION (Diseases and Causes of Death)	Total	Algoma.	Brant.	Bruce.	Carleton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haldimand.	Haliburton.	Halton.	Hastings.	Huron.	Kenora.
Grand Total (including Cities and Towns)	34,551	524	540	501	2015	189	582	1080	671	649	194	137	240	722	527	138
Total (Rural Municipalities)	17,371	259	202	501	330	189	359	515	241	464	194	137	240	448	527	86
I.—Endemic, Epidemic and Infectious Diseases.																
Group Total	2,405	48	24	47	34	11	37	56	49	40	18	13	27	70	54	30
1A. Typhoid fever	101	1	....	2	1	....	....	1	1	5	....	....	....	3	1	....
1B. Paratyphoid fevers	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Relapsing fever (Spirillum obermeieri)	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5A. Malarial fever	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
6. Smallpox	16	2	....	....	....	....	....	....	1	1	....	....	....	3	....	....
7. Measles	34	1	....	1	....	....	....	1	....	3	1	....	1	1	1	2
8. Scarlet fever	58	1	....	....	....	1	1	4	1	2	1	1	....	3	1	....
9. Whooping cough	156	....	5	2	3	....	2	6	1	3	2	1	2	7	3	2
10. Diphtheria	275	10	....	4	2	1	8	10	1	2	4	6	1	1	6	2
11A. Influenza, with pneumonic complications specified	96	2	....	....	....	1	3	5	1	2	2	....	....	1	....	....
11B. Influenza, without pneumonic complications specified	219	1	3	5	8	....	1	2	5	4	2	....	2	4	11	11
13. Mumps	2	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....
15. Cholera nostras	21	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16C. Dysentery, due to other causes or of unspecified origin	101	3	....	1	4	....	1	3	1	....	....	1	4	5	4	....
21. Erysipelas	35	....	....	....	....	....	2	1	....	2	....	....	1	1	....	....
23. Encephalitis lethargica	11	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....
25. Purulent infection, septicaemia	60	....	....	2	1	1	2	2	1	1	1	1	2	....	3	....
27. Anthrax	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
29. Tetanus	9	....	....	....	....	....	1	....	....	2	....	....	....	....	....	....
30. Mycoses	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
31. Tuberculosis of the respiratory system	1,020	22	15	24	10	4	14	14	32	11	4	2	11	39	18	13
32. Tuberculosis ,of the meninges and central nervous system generally	47	....	1	3	....	1	....	1	1	1	....	....	1	....	1	....
33. Tuberculosis of the intestines and peritoneum	39	....	....	....	2	....	....	....	....	....	....	....	....	....	1	....
34. Tuberculosis of the vertebral column	14	2	....	....	1	....	....	....	....	....	....	....	....	....	....	....
35. Tuberculosis of the joints	7	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
36B. Tuberculosis of the bones (vertebral column excepted)	2	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
36D. Tuberculosis of the genito-urinary system	8	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
36E. Tuberculosis of organs other than the above	8	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
37A. Disseminated tuberculosis, acute	27	....	....	....	....	1	....	....	1	....	....	....	....	1	2	....
37B. Disseminated tuberculosis, chronic	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total deaths from tuberculosis	1,177	25	16	28	14	16	14	17	34	13	4	2	12	41	22	13
38A. Syphilis, primary	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
38C. Syphilis, tertiary	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
38D. Syphilis, hereditary	8	....	....	1	....	....	....	1	....	....	....	....	1	....	....	....
38E. Syphilis, stage not indicated	14	1	....	1	....	....	....	2	2	....	....	....	1	....	1	....

No. 10.

Diseases in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville.	Lennox and Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford.	Parry Sound.	Peel.	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfrew.	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland	Wellington.	Wentworth.	York.	Grand Total (including Cities and Towns.)
736	661	485	777	186	591	119	1532	208	419	330	739	572	526	267	231	600	499	510	230	123	549	1031	822	383	593	480	336	837	725	742	1901	7062	34,551
505	480	355	600	186	293	119	558	208	289	330	623	418	288	267	231	369	236	430	230	123	430	600	647	217	171	480	220	299	441	426	442	1178	34,551
64	50	39	86	19	45	19	82	67	36	35	69	37	29	35	24	33	82	23	19	47	78	102	45	42	100	25	36	48	40	81	280	4,642
3	2	3	2	..	4	..	2	2	2	7	5	2	..	6	..	..	1	5	2	2	6	3	..	..	8	7	..	2	5	..	1	1	209
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	3	...	...	...	...	...	...	...	...	2	1	24
1	..	..	3	..	..	1	...	2	...	3	1	1	..	3	1	..	..	1	..	1	..	3	..	..	..	..	1	..	..	..	..	..	54
1	5	2	..	..	2	1	2	1	..	..	1	1	1	3	..	..	3	2	..	3	..	1	1	3	..	1	1	3	1	1	..	2	144
7	4	1	2	..	8	1	3	..	..	1	1	2	..	1	3	2	1	6	4	1	2	3	..	2	11	2	4	4	3	5	20	310
13	3	..	7	2	9	2	7	5	10	..	4	2	2	4	3	2	2	14	1	4	7	9	17	20	5	17	..	..	7	6	4	27	653
5	2	3	4	..	1	1	2	1	..	..	8	1	1	1	6	..	1	5	5	..	1	3	10	2	..	5	2	..	2	..	..	7	187
6	4	4	13	4	1	5	3	4	1	4	10	5	1	1	2	3	1	10	3	3	3	3	12	..	6	12	6	2	7	7	2	12	322
...	1	...	...	...	...	...	1	...	1	...	2	...	...	...	...	1	1	4	...	...	1	2	..	2	..	1	1	...	...	...	1	2	24
1	1	2	5	2	..	..	2	1	..	1	..	3	2	2	..	4	5	1	..	1	4	6	3	1	..	14	1	2	1	..	5	4	158
...	2	1	1	..	..	..	1	..	..	1	1	1	1	..	3	1	2	..	..	..	..	2	1	1	..	..	1	2	1	1	..	4	91
...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	48
...	..	2	3	..	..	3	1	..	..	2	2	1	4	2	1	1	1	..	..	..	1	1	1	1	2	2	2	1	1	1	2	5	177
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	3
21	18	16	37	8	13	7	50	45	18	12	19	13	9	10	3	14	11	26	8	5	21	33	39	15	13	24	6	16	15	13	48	181	1,731
1	..	2	2	1	5	..	3	1	2	..	..	..	..	..	..	..	2	4	..	..	..	2	4	..	1	2	..	..	..	1	..	4	119
2	5	1	4	..	..	..	..	..	..	..	..	2	4	..	..	..	..	1	..	..	..	1	3	..	3	1	..	1	1	..	2	4	85
...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	1	2	...	...	...	...	...	...	1	2	...	1	28
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	1	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	7
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
1	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	21
1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	13
...	1	1	2	...	...	...	...	...	1	1	1	2	..	2	...	...	...	1	...	...	...	...	...	1	1	1	1	...	3	3	...	...	53
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	5
26	26	20	46	10	19	7	54	46	22	15	20	17	14	12	4	15	13	33	8	5	22	39	50	15	18	29	7	19	17	20	56	192	2,083
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	65
1	..	..	...	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	55

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH.	Total.	Algoma.	Brant.	Bruce.	Carleton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haliburton.	Halton.	Hastings.	Huron	Kenora.
40. Gonococcal infection (ophthalmia excepted)	2														
41. Gonorrhoeal or purulent ophthalmia															
42. Other endemic, epidemic or infectious diseases	2													1	
II.—General Diseases.															
Group Total	1,974	21	18	69	32	23	48	57	25	74	22	15	27	47	105	5
43. Malignant tumors of the buccal cavity	53	2		2	2			5		2	1	1		2	1	
44. Malignant tumors, stomach and liver	398	4	2	11	5	3	12	11	4	14	5	2	7	12	23	2
45. Malignant tumors, peritoneum, intestines and rectum	165	1		6	2	1	8	6	2	7			3	2	10	
46. Malignant tumors, female genital organs	81	1	1	2			1	1	1	3		1		1	5	1
47. Malignant tumors, breast	104	2	1	3	2	3	2	2	2	2	1		2	1	4	
48. Malignant tumors, skin	46		1			1	1	1		2			1	3	3	
49. Malignant tumors of other or unspecified organs	328	3	5	15	4	2	4	9	2	10	6	4	3	7	17	
Total deaths from cancer	1,175	13	10	39	15	10	28	35	11	40	13	8	16	28	63	3
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	15		1	1	1			2			1		1	1	2	
51. Rheumatic fever	73	1		2	1	1	3	6	1	2	2	1		3	2	
52. Chronic rheumatism, osteo-arthritis, gout	83			4	4	2	2	1	3	4		1	2	2	2	
53. Scurvy	2															
54. Pellagra																
56. Rickets	13	1		1									1			
57. Diabetes	168		1	6	3	5	3	4	2	9	1	1	4	4	10	1
58A. Pernicious anaemia	232	2	3	7	4	1	7	5	4	8	4	3	2	7	14	
58B. Other anaemias and chlorosis	57			4		2	2		1	5		1		1	2	1
59. Diseases of the pituitary gland	1															
60A. Exophthalmic goitre	43	1	2	2			1	2		3			1		2	
60B. Other diseases of the thyroid gland	35	1		1	1					1				1	4	
62. Diseases of the thymus	1															
63. Diseases of the adrenals	9														1	
64. Diseases of the spleen	6					1									1	
65A. Leukaemia	17	1		1	1		1	1	1							
65B. Lymphadenoma (Hodgkins disease)	6															
66. Alcoholism (acute or chronic)	10						1		1							
67A. Chronic lead poisoning																
67B. Chronic poisoning by other mineral substances	1															
69. Other general diseases	27	1	1	1	2	1		1	1	2	1				2	
III.—Diseases of the Nervous System.																
Group Total	1694	12	22	45	27	17	37	48	27	52	23	10	24	42	52	5
70. Encephalitis	21							1		1			1	1		
71A. Meningitis	88		1	2			1	3	3	2	2		2		3	
71B. Cerebrospinal meningitis	22			1								1				
72. Tabes dorsalis (locomotor ataxy)	11							1						1	1	
73. Other diseases of the spinal cord	112		3	1	2	3	1	6		6	2		2	1	4	
74A. Cerebral haemorrhage, apoplexy	831	4	13	21	16	7	25	23	9	21	12	5	11	21	33	3

No. 10.—Continued.

Diseases in each County, 1921.

Kent.	Lambton	Lanark.	Leeds & Grenville.	Lennox & Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford	Parry Sound	Peel	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfrew	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Grand Total, including Cities and Towns.
...	..	1	...	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	....	...	7
...	..	..	..	..	..	..	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	...	3
...	.	..	..	..	..	..	...	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	...	..	..	..	..	..	..	..	....	..	9
66	64	46	73	21	36	11	65	11	25	48	81	56	46	25	38	60	35	25	33	4	36	72	66	10	8	16	27	35	46	50	36	115	4,149
2	1	..	2	1	..	..	1	..	..	1	3	1	..	1	..	1	2	..	1	..	2	5	3	..	..	1	..	2	..	..	1	4	98
22	12	8	15	4	9	4	10	..	6	11	11	14	13	10	10	19	6	7	8	..	4	9	16	...	1	1	3	6	10	8	8	16	860
4	5	7	7	2	3	1	7	1	..	3	6	2	2	2	6	3	2	1	3	..	2	3	14	1	1	..	3	5	3	4	4	10	391
...	...	1	2	1	4	3	1	..	..	2	1	4	4	2	1	3	1	1	2	1	3	..	4	2	1	2	1	2	2	1	1	10	236
6	3	2	2	..	..	1	2	3	1	2	5	1	2	..	1	5	2	2	2	..	3	4	4	1	..	..	3	2	2	4	1	11	235
...	2	1	4	2	2	..	2	..	1	..	4	..	1	1	..	..	1	..	3	..	1	2	..	..	..	..	..	3	..	1	..	2	66
11	16	11	7	2	9	..	14	..	5	13	15	13	11	4	5	7	3	3	4	2	9	10	6	..	2	2	2	5	9	8	7	22	699
45	39	30	39	12	27	9	37	4	13	32	45	35	33	20	23	38	17	14	23	3	24	33	47	4	5	6	12	25	26	26	22	75	2,585
...	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	1	36
1	3	..	1	1	1	..	2	1	2	1	2	..	2	1	1	1	2	2	3	..	..	5	2	1	..	1	2	..	..	1	..	9	145
1	4	2	3	..	3	..	1	..	1	..	5	2	2	..	4	6	4	1	..	..	1	2	3	..	..	1	1	..	3	1	1	4	142
...	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	1	..	..	..	1	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	..	..	..	..	..	..	..	1	23
2	1	1	5	1	2	..	7	1	2	4	8	6	2	2	3	6	2	2	2	1	2	7	4	..	1	2	4	5	7	8	5	9	334
7	11	9	16	3	1	..	12	2	...	5	8	11	4	1	3	8	8	1	1	..	3	13	6	..	..	..	3	3	3	10	3	6	405
4	2	..	3	1	...	1	1	1	1	1	5	1	..	1	1	1	1	2	..	..	..	4	..	1	..	..	1	..	..	1	1	3	106
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
2	..	..	2	2	..	..	..	1	..	2	3	..	2	..	1	..	1	1	1	..	2	3	..	1	1	1	..	..	1	1	..	1	77
..	1	1	2	1	1	..	2	..	..	1	2	..	..	..	1	..	..	..	..	..	3	2	3	..	..	1	2	..	..	1	....	2	74
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3
..	1	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	20
2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	13
..	..	2	1	..	..	..	1	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	45
1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	13
..	1	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2
1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	1	1	..	2	..	2	1	74
46	61	35	64	17	20	6	58	16	21	38	83	57	47	30	20	36	18	34	25	9	40	57	74	15	8	13	20	38	33	54	50	108	3,268
1	..	1	1	..	..	..	1	..	..	..	..	1	1	1	1	1	..	..	1	..	1	1	2	..	1	1	..	..	..	2	..	..	65
...	4	1	..	1	2	..	2	..	5	3	3	3	3	5	2	1	1	3	1	3	5	2	5	2	..	1	3	..	2	2	3	....	2	187
..	3	..	1	..	..	..	..	1	....	..	1	1	1	..	1	..	..	2	..	..	..	..	3	..	1	1	1	..	..	..	..	..	5	50
2	..	..	..	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	...	..	1	..	29
5	4	5	4	4	1	..	4	1	1	4	8	2	1	1	1	2	1	1	2	..	5	2	4	2	..	..	2	5	1	3	3	2	229
25	35	18	22	7	11	3	32	12	8	14	43	35	19	6	11	26	11	18	12	3	15	19	46	4	2	4	9	21	17	29	17	53	1,496

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH.	Total.	Algoma.	Brant.	Bruce.	Carleton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haldimand.	Haliburton.	Halton.	Hastings.	Huron.	Kenora.
74B. Cerebral thrombosis and embolism	21							2		2	1			1		
75A. Hemiplegia	65	1		4	1	1		1	1	1		1	1	1	3	
75B. Other forms of paralysis	105		2	8	1	1	2	2	1	6	1	1	2	7	2	
76. General paralysis of the insane	15								5					1		
77. Other forms of mental alienation	56			1				1	3			2	1			
78. Epilepsy	82	1			2			2	2	1	1			1	2	1
79. Convulsions (non-puerperal; 5 years and over)	12		2													
80. Infantile convulsions (under 5 years of age)	103	4		4	3	1	1	2	2	4	1		1	6	1	1
81. Chorea	5								1							
82A. Hysteria and neuralgia	6						1						1			
82B. Neuritis	27	1	1	1			1			2	2					
83. Cerebral softening	16				1	1										
84. Other diseases of the nervous system	72	1		2	2	3	3	3		3			1	1	3	
85D. Tumors of the eye																
86A. Diseases of the ears	21						1	1		3						
[86B. Diseases of the mastoid process (or sinus)	3										1		1			
IV.—DISEASES OF THE CIRCULATORY SYSTEM.																
Group Total	2,830	23	37	73	76	47	77	72	39	79	33	29	55	65	108	3
87. Pericarditis	9		1							1						
88. Acute endocarditis and myocarditis	131	4		2	4	1	3	4	3	2	2	5	5	1	4	
89. Angina pectoris	104	1		3	1	1	5	5				3	4	2	3	
90. Other diseases of the heart	1,536	15	28	51	43	18	38	31	19	55	18	10	27	35	56	
91A. Aneurism	16						1	30					2	1	2	
91B. Arterio-sclerosis	949	3	8	13	27	27	30	30	17	19	12	11	14	25	34	1
92. Atheroma and other diseases of the arteries	22			1	1					1			1		4	
93. Embolism and thrombosis (not cerebral)	24			1											2	
94. Diseases of the veins (varices, haemorrhoid, phlebitis, etc.)	17			1						1			1		1	
95. Diseases of the lymphatic system (lymphangitis,etc)	4												1	1		
96. Haemorrhage without determined cause; other diseases of the circulatory system	18			1				2			1				2	2
V.—DISEASES OF THE RESPIRATORY SYSTEM.																
Group Total	1,915	36	30	42	50	21	37	66	28	62	30	18	35	61	42	5
97. Diseases of the nasal fossae and of their annexa	2						1							1		
98. Diseases of the larynx	28						2	1		1				2	1	1
99A. Bronchitis, acute	56	2	1	1	2	1	3		1	2	1		3	2	2	1
99B. Bronchitis, chronic	54	4		2	2	2	1			3	2		1	1	5	
99C. Bronchitis, not otherwise defined, under 5 years of age	60	1		1		1	1	2		3		1		2	2	
99D. Bronchitis, not otherwise defined, over 5 years of age	125	1	3	3	1	2	2	3	4	6	2		3	2		1
100A. Broncho-pneumonia	379	10	3	7	5	1	6	13	8	10	3	5	2	12	6	1
100B. Capillary bronchitis	15			2	1		1	1		1				2		
101A. Pneumonia, lobar	211	2	2	1	7	3	1	7	2	3	6	3	5	3	7	1
101B. Pneumonia, not otherwise defined	804	13	19	21	26	8	16	31	11	26	13	7	18	30	13	

No. 10—Continued.

Diseases in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville.	Lennox and Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford.	Parry Sound.	Peel.	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfrew.	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland	Wellington.	Wentworth.	York.	Grand Total, including Cities and Towns.
2	2	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	1	..	5	57
3	4	..	1	..	2	..	..	1	1	2	2	..	4	3	1	..	1	..	5	..	1	5	..	..	1	..	1	..	1	5	1	4	148
..	..	1	7	4	2	1	3	..	1	2	6	1	1	2	..	2	1	5	..	2	2	2	..	1	1	1	2	4	3	2	2	8	199
..	..	..	..	3	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	35
..	1	..	7	..	..	..	2	..	..	..	3	..	1	..	3	1	..	1	..	1	..	2	1	..	..	..	2	1	..	..	16	5	123
2	1	..	9	..	1	..	3	..	..	2	3	4	13	3	..	..	..	1	..	..	1	6	2	2	..	1	..	..	4	2	3	16	131
..	..	..	..	..	..	..	..	..	..	3	1	1	..	1	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	21
4	3	1	2	..	..	2	4	..	3	1	5	2	1	3	1	2	1	2	2	..	4	3	3	2	2	1	2	3	3	1	2	7	202
..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	11
..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
..	..	3	1	1	..	..	..	..	..	1	2	2	..	..	..	..	..	..	..	..	2	1	3	..	..	..	..	1	..	1	..	1	32
..	..	1	1	..	..	..	2	..	..	1	2	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	1	..	..	..	1	1	31
1	1	4	2	..	1	..	3	..	..	2	5	..	2	2	1	..	1	..	..	..	2	7	2	2	..	..	..	..	1	3	1	7	138
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
1	..	..	1	..	..	..	..	1	2	..	1	1	1	1	..	..	..	..	1	..	..	1	1	..	..	1	..	..	1	..	..	2	51
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	20
91	94	64	118	27	51	4	120	25	25	84	103	84	51	34	41	75	44	35	47	9	56	102	108	11	20	41	27	51	81	62	80	149	5,360
1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	1	..	..	..	17
3	3	2	4	..	1	1	4	..	3	..	5	2	2	2	3	4	..	2	1	..	1	3	2	2	1	4	2	3	7	3	3	18	351
9	5	2	2	..	..	..	6	..	..	6	4	1	3	1	1	4	2	4	3	..	1	3	6	..	2	2	2	..	..	..	4	3	210
48	52	40	68	15	29	3	51	21	16	29	51	43	31	23	20	41	29	18	27	3	39	59	48	6	12	28	16	28	40	37	44	77	2,816
1	..	..	1	1	..	..	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	38
24	30	20	41	11	17	..	55	4	6	46	36	38	12	7	16	23	11	10	16	6	13	32	46	2	3	5	7	18	31	21	26	45	1,748
..	..	..	1	..	2	..	..	..	..	2	1	..	1	..	..	1	2	..	..	..	..	..	1	..	..	..	..	..	2	1	..	..	38
3	3	..	1	..	2	..	1	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	2	..	1	1	..	..	..	..	2	1	58
..	1	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	3	3	..	..	..	1	..	..	..	..	2	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	22
2	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	1	1	35
60	43	47	58	18	32	18	43	12	27	21	62	45	37	28	19	36	24	67	36	12	50	59	54	21	18	52	19	29	50	55	60	140	3,952
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
1	1	1	1	..	..	..	..	..	1	1	2	1	..	..	..	1	..	2	..	..	1	1	1	..	1	1	..	..	..	..	1	2	46
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1	3	1	3	..	1	..	..	1	..	..	2	..	5	1	1	..	..	1	3	..	..	1	..	1	..	1	..	..	..	2	1	2	98
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5	3	2	3	4	3	2	2	3	2	1	13	2	2	..	..	4	2	1	..	1	5	7	2	..	1	..	3	4	4	2	1	8	191
8	3	15	10	4	9	..	5	..	9	4	15	8	8	10	4	9	4	16	4	4	4	13	12	5	5	17	4	5	10	14	11	38	863
1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	23
8	6	2	7	2	5	2	5	3	2	..	8	5	3	4	..	3	1	11	6	..	6	6	7	..	2	5	3	3	8	2	15	18	537
26	18	23	22	7	10	6	24	4	8	11	15	24	15	9	11	13	12	21	15	5	26	23	21	14	5	18	7	12	22	31	26	48	1,582

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH.	Total.	Algoma.	Brant.	Bruce.	Carleton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haldimand.	Haliburton.	Halton.	Hastings.	Huron	Kenora.
102. Pleurisy	50	1	....	2	....	1	1	4	2	1	....	....	....	1	3	...
103. Congestion and haemorrhagic infarct of the lung	43	....	....	....	2	1	1	....	....	3	1	2	1	....	....	...
104. Gangrene of the lung	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
105. Asthma	62	2	2	1	3	1	1	2	....	2	1	....	....	3	3	...
106. Pulmonary emphysema	2	....	....	1	....	....	....	....	....	....	....	....	....	....	....	...
107 A. Chronic intestitial pneumonia, occupational disease of lung	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
107B. Diseases of the mediastinum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	23	....	....	....	1	....	....	2	....	1	1	....	2	....	....	...
VI.—DISEASES OF THE DIGESTIVE SYSTEM.																
Group Total	1,545	29	9	33	33	25	21	55	16	39	11	8	22	42	31	12
108A. Diseases of the teeth and gums	18	....	....	1	1	....	....	1	....	2	....	....	....	1	....	...
108B. Other diseases of the buccal cavity and its annexa	7	....	....	....	....	....	1	1	....	....	....	....	....	....	1	...
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	59	....	....	1	....	....	....	1	....	2	1	....	....	2	2	1
110. Diseases of the oesophagus	3	....	....	....	....	....	....	....	....	1	....	....	....	....	....	...
111A. Ulcer of the stomach	41	....	1	1	....	....	....	2	....	....	1	....	1	2	1	...
111B. Ulcer of the duodenum	15	....	1	....	....	1	....	1	....	....	....	....	1	.	1	...
112. Other diseases of the stomach (cancer excepted)	139	2	1	3	4	3	1	4	2	7	2	2	....	4	1	1
113. Diarrhoea and enteritis (under 2 years)	614	19	3	8	16	10	10	25	5	5	1	1	16	15	6	6
114. Diarhoea and enteritis (over 2 years)	190	....	2	5	3	2	2	6	4	10	....	1	3	4	3	...
116E. Other parasites of the intestines	4	1	....	....	....	....	....	....	....	....	....	....	....	....	....	...
117. Appendicitis and typhlitis	101	5	....	4	2	4	....	1	1	2	2	2	....	2	4	...
118A. Hernia	30	....	....	1	1	1	....	....	....	....	2	....	....	1	1	...
118B. Intestinal obstruction	76	....	1	4	....	....	1	3	....	8	....	2	....	5	2	1
119A. Diseases of the anus and stercoral fistulae	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
119B. Other diseases of the intestine	45	....	....	....	....	....	1	2	2	....	....	....	1	....	1	...
120. Acute yellow atrophy of the liver	5	....	....	....	....	....	....	....	1	....	....	....	....	1	....	...
122B. Cirrhosis, not returned as alcoholic	40	....	....	1	2	1	3	2	....	....	....	....	....	1	5	...
123. Biliary calculi	36	1	....	1	....	....	1	1	....	1	....	....	....	....	....	1
124. Other diseases of the liver	73	....	....	2	1	1	....	2	1	1	....	....	....	1	3	1
125. Diseases of the pancreas	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
126. Peritonitis of unstated origin	39	1	....	1	3	1	1	2	....	....	1	....	....	....	3	1
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	8	....	....	....	....	1	....	1	....	....	1	....	....	....	....	...
VII.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ANNEXA.																
Group Total	826	11	9	34	10	3	26	35	4	25	8	5	15	18	40	...
128. Acute nephritis	73	2	1	3	....	....	3	8	....	....	....	1	1	2	3	...
129. Chronic nephritis (Bright's disease)	509	9	4	23	7	1	19	18	4	14	6	2	9	12	24	...
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	41	....	....	2	....	....	1	....	....	2	....	....	2	....	....	...

No. 10.—Continued.

Diseases in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville.	Lennox and Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford.	Parry Sound.	Peel.	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfew.	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Grand Total, including Cities and Towns.)
1	3	2	3	...	...	2	...	1	...	1	1	...	...	1	...	1	...	1	2	1	2	...	1	1	1	2	...	...	1	1	2	3	115
1	1	...	2	...	...	...	2	...	2	...	...	1	1	...	2	2	1	8	2	...	1	...	1	...	...	...	...	...	...	...	2	3	83
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1	3	...	3	...	1	...	1	...	...	...	3	3	2	...	1	2	2	1	2	1	1	1	...	...	1	1	1	2	3	1	4	128
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3	1	...	1	...	...	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	1	...	1	...	...	...	1	...	1	49
61	32	34	34	17	26	8	49	22	39	28	54	35	9	23	17	31	14	52	29	10	47	56	55	24	24	72	21	31	41	36	37	91	3,414
2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	1	...	1	1	...	1	...	...	1	...	...	...	...	...	2	33
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	19
7	1	...	1	...	2	...	6	1	1	...	4	4	...	2	1	...	...	...	1	...	2	2	3	2	1	1	1	...	...	1	2	3	122
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
2	2	1	1	...	1	...	4	...	...	1	1	...	...	...	1	...	1	1	1	...	...	1	3	...	1	...	1	1	...	2	...	6	91
...	1	...	2	...	...	...	...	...	...	1	...	...	...	...	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	43
5	2	5	6	6	1	1	2	1	4	1	7	4	...	1	3	1	3	5	4	2	5	4	3	...	2	1	5	5	...	3	2	8	264
23	7	10	8	4	11	4	12	6	26	14	16	10	1	10	4	10	3	31	6	1	19	25	30	14	10	53	9	6	26	7	12	40	1,327
8	11	5	4	3	2	1	12	5	3	4	5	3	1	1	1	4	2	4	4	1	7	8	10	3	2	3	1	3	4	4	7	9	292
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	5
2	1	3	2	1	...	...	1	4	...	1	5	2	2	3	1	4	...	...	2	2	1	6	1	1	3	4	...	5	...	6	5	4	344
2	...	...	2	1	1	...	...	...	...	1	1	2	...	...	1	1	...	1	...	...	...	2	2	1	...	...	...	...	1	1	1	...	2	74
...	4	1	1	2	...	...	2	2	...	1	3	2	2	2	...	1	1	1	1	1	2	...	...	2	2	5	...	1	2	3	2	3	212
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
6	...	3	2	...	...	1	...	1	...	...	2	1	...	1	1	1	...	1	1	1	2	...	...	1	...	...	1	1	1	6	1	3	100
...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	9
...	2	...	1	...	2	...	...	...	...	...	2	2	1	...	...	2	...	2	...	...	1	1	...	...	2	1	...	2	1	...	2	1	80
1	1	3	...	...	3	...	1	1	1	1	2	2	1	1	...	1	...	2	1	...	1	1	...	...	1	1	1	1	...	...	2	1	91
2	...	2	2	...	3	...	7	...	1	2	4	1	1	...	2	5	1	4	3	1	3	5	...	...	...	1	...	4	4	1	1	...	172
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6
1	...	...	...	...	...	...	...	1	3	...	1	1	...	...	...	...	...	...	3	1	2	...	...	...	1	...	1	1	1	...	1	7	94
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	1	...	...	...	23
24	31	20	46	17	16	2	33	9	7	17	33	16	9	9	7	26	7	19	12	2	18	35	33	6	9	12	12	16	13	19	17	31	1,717
...	3	...	1	1	1	...	3	...	2	1	4	1	...	1	1	3	2	2	1	...	3	2	2	4	...	6	...	...	2	2	...	1	167
14	16	17	34	10	12	...	22	4	3	15	17	9	6	7	1	13	4	15	7	1	7	24	28	2	4	5	7	9	6	9	11	18	978
1	2	1	2	...	1	...	3	...	...	1	3	2	...	...	2	1	...	...	...	1	1	1	2	...	1	...	1	...	2	3	1	2	106

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH	Total.	Algoma.	Brant.	Bruce.	Carleton	Dufferin.	Elgin.	Essex.	Frontenac.	Grey	Haldimand.	Haliburton	Halton	Hastings.	Huron.	Kenora.
132. Calculi of the urinary passages	8				2											
133. Diseases of the bladder	49		2			1	2	1		3			1	1	6	
134A. Stricture of the urethra	2													1		
134B. Other diseases of the urethra	1															
135. Diseases of the prostate	106			6		1	1	6		5	1	2	2	1	6	
136. Non-venereal diseases of the male genital organs	2		1													
137. Cysts and other benign tumors of the ovary	9															
138. Salpingitis and pelvic abscess	6															
139. Benign tumors of the uterus	8				1						1					
140B. Non-puerperal uterine haemorrhage	3													1		
141 Other diseases of the female genital organs	8		1					2								1
143. Non-puerperal diseases of breast	1									1						
VIII.—THE PUERPERAL STATE.																
Group Total	172	2		6	3	2	2	4	1	4	2	1	1	5	9	1
143A. Abortion	11	1			1					1	1					
143B. Ectopic gestation	2															
143C. Other accidents of pregnancy	15	1		1	1							1		1	2	
144. Puerperal haemorrhage	23					1		1		1					1	
145A. Caesarean section																
145B. Other surgical operations and instrumental delivery	3															
145C. Other accidents of labor	21					1			1							
146. Puerperal sepsis	30			1				1					1	1	1	
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	10			1			1	1			1			1	1	
148. Puerperal albuminuria and convulsions	42			2				1		2				1	4	
149. Childbirth (without other explanation)	15			1	1		1							1		1
IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																
Group Total	87		1	3	2	4	2	2	1	1			1	1	4	
151. Gangrene	56			3	1	2	2	1		2				1	2	
152. Furuncle	5					1		1								
153. Phlegmon, acute abscess	12				1	1			1				1		1	
155. Other diseases of the skin and its annexa	14		1												1	
X.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																
Group Total	19			1						1			1		2	
156. Diseases of the bones (tuberculosis and rickets excepted)	10									1			1		1	
157. Diseases of joints (tuberculosis and rheumatism excepted)	8			1											1	
158. Other diseases of the organs of locomotion	1															

No. 10.—Continued.

Diseases, in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville	Lennox and Addington.	Lincoln.	Manitoulin	Middlesex.	Muskoka.	Nipissing	Norfolk.	Northumberland and Durham	Ontario.	Oxford	Parry Sound.	Peel.	Perth	Peterboro.	Prescott and Russell.	Prince Edward	Rainy River.	Renfrew.	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York	Grant total, including Cities and Towns.
...	1	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	18
3	2	1	2	2	1	..	3	1	..	..	2	..	..	..	..	..	..	1	..	1	1	2	..	..	1	1	1	3	..	..	3	1	105
...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4
...	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
3	6	1	3	..	1	2	2	2	1	..	4	3	2	1	3	7	..	1	3	..	5	5	1	..	2	..	2	3	2	3	2	5	205
...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
...	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	1	22
1	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	25
2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	30
...	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
...	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	38
...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
9	4	1	4	2	1	1	7	2	5	3	6	2	7	4	6	2	3	6	..	2	4	2	3	..	2	11	3	3	8	3	1	12	387
2	..	..	1	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	39
...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	11
...	1	1	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	48
1	..	..	..	..	..	..	..	..	..	..	3	..	1	1	..	2	1	..	..	..	..	..	1	..	1	1	..	..	1	1	..	5	47
...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
...	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
2	..	..	..	..	1	..	1	..	..	..	1	..	1	1	1	1	..	2	..	..	1	..	1	..	..	2	1	..	1	..	..	2	40
1	..	..	..	..	..	..	1	2	3	2	1	..	..	1	..	1	..	1	..	1	2	..	1	..	..	3	..	..	3	1	..	1	75
...	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14
3	1	..	2	2	..	..	2	..	..	..	..	..	3	..	3	..	..	1	..	1	1	2	..	..	1	2	2	1	2	1	..	2	81
...	1	..	..	..	..	1	1	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	1	1	24
3	3	2	1	2	1	1	4	1	1	..	4	2	2	1	1	2	1	1	..	..	2	1	7	2	..	2	4	..	2	6	1	4	182
3	1	2	1	2	1	1	1	..	1	..	3	1	..	1	1	1	..	1	..	..	1	1	5	1	..	2	3	..	2	3	1	2	98
...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	12
...	1	..	..	..	..	..	1	..	..	..	..	1	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	43
...	..	..	..	..	..	..	2	1	..	..	1	..	1	..	..	1	..	..	..	..	..	..	2	1	..	..	1	..	..	1	..	1	29
1	..	1	2	1	..	..	..	..	..	1	2	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2	1	61
...	..	1	..	1	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	33
1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	21
...	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH.	Total.	Algoma.	Brant.	Bruce.	Carleton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haldimand.	Haliburton.	Halton.	Hastings.	Huron.	Kenora.
XI.—Malformations.																
Group Total	247	3	2	11	7	5	2	4	3	5	1	1	2	3	9	1
159A. Congenital malformations not otherwise specified (still-births excepted)	138	2	....	9	2	2	1	1	1	4	....	1	2	1	6	...
159B. Hydrocephalus	20	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....
159C. Congenital malformations of the heart	89	....	1	2	5	3	1	2	2	1	1	....	....	2	3	1
XII.—Diseases of Early Infancy.																
Group Total	1,343	22	11	38	25	13	16	47	16	17	11	14	13	31	17	4
160B. Congenital debility, icterus and scleroma	479	12	7	11	6	1	6	12	7	3	4	7	6	10	8	4
161A. Premature birth	653	6	3	18	15	6	9	28	5	10	6	6	5	16	7	...
161B. Injury at birth	93	2	1	3	1	5	....	4	1	....	....	1	....	3	....	....
162. Other diseases peculiar to early infancy	115	2	....	6	3	1	1	3	3	4	1	....	2	2	2	...
163. Lack of care	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
XIII.—Old Age.																
Group Total	888	11	20	50	9	11	32	24	15	35	13	6	7	21	32	3
XIV.—External Causes.																
Group Total	1,073	30	13	27	15	6	17	35	10	24	17	14	10	29	18	15
165. Suicide by solid or liquid poisons	5	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
166. Suicide by corrosive substances	4	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
167. Suicide by poisonous gas	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
168. Suicide by hanging or strangulation	28	....	....	....	1	....	....	1	....	....	1	....	....	....	1	...
169. Suicide by drowning	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
170. Suicide by firearms	23	1	....	1	1	....	....	....	....	1	....	....	....	....	....	2
171. Suicide by cutting or piercing instruments	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
172. Suicide by jumping from high places	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
174. Other suicides	7	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....
175. Poisoning by food	5	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
177. Other acute accidental poisonings	27	....	1	1	....	1	1	....	....	1	....	....	1	....	1	...
178. Conflagration	20	1	....	....	1	....	....	....	....	....	....	....	....	....	1	...
179. Burns (conflagration excepted)	41	....	....	3	1	1	....	3	....	1	....	1	....	....	....	1
180. Accidental mechanical suffocation	11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
181. Accidental absorption of irrespirable or poisonous gas	9	....	....	....	....	....	....	....	....	1	....	1	....	2	....	....
182. Accidental drowning	240	15	2	4	7	....	6	8	1	2	6	6	2	4	2	3
183. Accidental injury by firearms (war casualties excepted)	41	3	1	1	....	....	1	....	....	....	1	1	1	....	....	2
184. Accidental injury by cutting or piercing instruments	5	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
185. Accidental injury by fall	76	....	1	4	....	1	....	2	1	3	2	1	....	2	2	...
186A. Accidental injury in mines	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
186B. Accidental injury in quarries	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
187. Accidental injury by machinery	19	....	....	....	....	....	....	1	....	2	....	....	....	....	....	....

No. 10.—Continued.

Diseases in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville.	Lennox and Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford.	Parry Sound.	Peel.	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfrew.	Simcoe.	Stormont, Dundas & Glengarry.	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Grand Total, including Cities and Towns.
8	7	5	11	..	3	1	12	2	2	7	5	2	3	4	4	4	4	7	..	..	12	14	11	..	1	9	5	6	5	2	10	22	493
4	6	3	7	..	1	1	6	2	..	3	3	1	3	4	2	2	3	2	..	..	6	10	6	..	..	4	4	5	2	..	5	11	256
1	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	2	1	..	..	..	1	1	1	..	..	2	2	37
3	..	1	4	..	2	..	6	..	1	3	2	1	..	..	2	2	1	4	..	..	4	3	5	..	..	4	..	..	3	2	3	9	200
31	39	25	34	9	13	5	23	13	48	21	38	28	18	28	22	28	13	69	12	17	46	39	50	36	12	93	19	16	48	28	24	103	2,908
10	8	8	16	2	3	5	11	5	18	6	20	12	8	7	8	13	..	34	4	7	14	11	15	12	5	37	8	5	19	13	9	22	1,029
14	22	15	11	5	8	..	6	8	21	13	13	14	8	16	11	15	10	21	8	7	26	22	21	15	7	46	8	9	22	11	12	68	1,407
2	6	1	4	2	1	..	1	..	5	..	1	2	..	3	3	..	2	5	..	2	3	3	4	3	..	3	1	1	5	3	2	4	223
5	2	1	3	..	1	..	5	..	4	2	4	..	2	1	..	..	1	9	..	1	3	3	10	6	..	7	2	1	2	1	1	8	244
..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5
14	28	20	27	14	19	15	17	7	7	8	40	23	14	13	11	14	16	11	5	..	28	41	39	3	7	7	15	19	12	40	18	47	1,404
23	18	13	35	20	28	3	33	16	25	16	37	24	15	28	20	17	12	13	6	26	28	34	28	28	14	39	17	15	49	25	25	63	2,043
..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	18
..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6
3	2	..	1	..	..	..	2	..	..	..	..	3	1	..	..	1	..	..	..	..	1	..	2	..	..	..	3	..	2	..	2	1	41
..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	16
..	..	1	..	..	1	..	1	..	..	..	2	1	..	1	..	..	..	..	..	1	1	..	2	1	..	1	..	1	..	..	1	2	38
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	11
..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	11
1	..	..	..	2	..	1	1	..	1	..	..	..	..	2	..	..	..	..	..	..	3	1	1	..	..	1	..	..	1	..	3	2	65
..	..	..	1	..	..	..	..	..	..	..	2	..	..	5	2	..	..	1	..	1	2	1	..	..	..	1	..	..	..	..	..	1	35
1	..	..	1	..	3	..	1	2	1	1	..	3	2	..	..	..	..	1	..	1	1	1	2	1	..	1	..	1	3	1	..	2	108
..	1	..	..	1	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	1	1	1	..	..	..	..	..	1	..	..	2	29
1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	36
7	6	5	8	8	6	..	1	5	8	..	10	4	..	9	1	1	4	2	3	7	7	12	..	11	2	13	1	1	12	3	8	7	358
1	..	..	2	..	2	..	..	1	2	1	2	..	..	2	..	1	..	1	..	4	2	1	..	3	1	2	1	..	..	..	..	1	65
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	11
..	4	1	4	1	4	..	2	..	1	2	3	2	2	2	4	2	2	1	1	1	..	5	1	..	..	2	2	1	3	3	1	..	128
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	..	..	..	..	..	..	6
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3
..	..	1	..	..	1	..	..	..	1	..	..	2	1	1	..	2	..	..	..	..	..	..	..	1	..	..	..	1	2	1	..	2	27

TABLE

Showing Total Deaths by Individual

CAUSES OF DEATH.	Total	Algoma.	Brant.	Bruce.	Carlton.	Dufferin.	Elgin.	Essex.	Frontenac.	Grey.	Haldimand.	Haliburton.	Halton.	Hastings.	Huron.	Kenora.
Other forms of crushing (vehicles, railways, landslides, etc.)	171	5	5	3	1	....	3	8	2	5	2	1	1	6	2	7
188A. Railroad accidents	66	1	....	....	....	....	1	2	1	1	1	....	....	1	1	4
188B. Street car accidents	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
188C. Automobile accidents	38	2	2	....	1	....	1	3	....	....	....	....	1	2	1	1
188D. Aeroplane and balloon accidents	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
188E. Injuries by landslides, snowslides, etc	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
188F. Other accidental injuries by crushing, etc	63	2	3	3	....	....	1	3	1	4	1	1	....	3	....	2
189. Injury by animals (poisoning excepted)	17	1	....	....	....	1	....	2	....	....	....	....	....	1	1	....
192B. Hunger or thirst	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
193. Excessive cold	3	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
194. Excessive heat	47	....	1	....	....	....	....	....	....	1	1	....	2	4	1	....
195. Lightning	7	....	1	....	....	....	....	....	....	....	1	....	....	1	....	....
196. Electricity (lightning excepted)	16	....	....	....	....	....	1	1	....	....	....	....	....	1	....	....
197. Homicide by firearms	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
198. Homicide by cutting or piercing instruments	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
199. Homicide by other means	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
200. Infanticide (murder of infants less than 1 year of age)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
201A. Dislocations	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
201C. Fracture (cause not specified)	144	1	1	7	1	....	2	8	4	4	2	1	3	5	5	....
202. Other external violence	80	2	....	3	1	2	1	....	1	2	....	1	....	3	1	....
203. Violent deaths of unknown causation	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
XV.—Ill-Defined Diseases.																
Group Total	353	11	6	22	7	1	5	10	7	5	5	3	....	13	4	2
204. Sudden death	36	....	3	4	....	....	2	1	....	1	....	....	....	....	....	....
205A. Cause of death unstated or ill-defined	317	11	3	18	7	1	3	9	7	4	5	3	....	13	4	2

No. 10.—Concluded.

Diseases in each County, 1921.

Kent.	Lambton.	Lanark.	Leeds and Grenville.	Lennox and Addington.	Lincoln.	Manitoulin.	Middlesex.	Muskoka.	Nipissing.	Norfolk.	Northumberland & Durham.	Ontario.	Oxford.	Parry Sound.	Peel.	Perth.	Peterboro.	Prescott and Russell.	Prince Edward.	Rainy River.	Renfrew.	Simcoe.	Stormont, Dundas & Glengarry	Sudbury.	Thunder Bay.	Timiskaming.	Victoria.	Waterloo.	Welland.	Wellington.	Wentworth.	York.	Grand Total, including Cities and Towns.
6	...	1	5	..	3	1	6	1	6	5	4	1	2	1	4	3	2	3	1	4	5	7	5	6	5	5	1	2	8	4	1	12	344
3	...	1	2	..	1	..	1	1	2	3	1	1	1	..	3	1	1	1	..	3	4	1	2	2	3	3	..	..	6	2	....	4	117
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
1	...	...	2	..	2	..	2	...	...	1	...	...	...	..	1	...	...	...	...	...	1	2	1	...	...	...	...	1	1	2	1	6	108
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	..	...	...	...	...	...	..	..	....	....	4
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	....	....	1
2	...	..	1	..	..	1	2	...	4	1	3	...	1	1	..	2	1	2	1	1	..	2	2	4	2	2	1	1	..	..	....	2	100
...	1	..	...	...	1	..	...	...	...	...	2	1	1	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	..	1	....	1	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	....	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	....	...	4
1	...	..	1	4	2	1	2	1	1	1	5	1	...	1	3	1	3	...	...	...	...	...	...	...	1	1	..	1	1	..	2	3	99
...	...	...	...	..	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	....	2	8
...	...	...	...	1	1	..	...	...	...	...	...	...	...	...	...	1	..	...	...	...	...	1	...	...	...	1	1	1	5	..	....	1	35
...	...	..	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	....	...	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	....	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	....	...	1
...	4	2	3	2	2	..	8	2	1	3	1	3	4	..	3	3	1	3	..	4	3	3	6	.	1	1	5	4	4	7	5	12	300
2	...	1	4	..	...	...	7	2	..	2	3	2	2	3	2	2	..	1	..	1	1	1	4	3	..	4	2	2	2	5	1	4	169
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	....	1
4	6	3	7	2	2	25	12	5	21	3	6	7	1	5	..	8	2	9	2	13	16	9	17	16	6	13	6	4	5	5	....	12	571
...	1	1	...	...	...	...	3	2	1	..	1	...	1	...	..	1	..	1	...	...	..	2	3	1	..	1	..	2	..	2	....	2	61
4	5	2	7	2	2	25	9	3	20	3	5	7	..	5	..	7	2	8	2	13	16	7	14	15	6	12	6	2	5	3	....	10	510

TABLE No. 11.

Table Showing Total Deaths by Individual Diseases in each City.—1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Belleville.	Brantford.	Chatham	Fort William.	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener.	London.	Niagara Falls.	Ottawa.	Owen Sound.	Peterboro.	Port Arthur.	St Catharines.	St. Thomas.	Sarnia.	Sault Ste. Marie.	Stratford	Toronto.	Welland.	Windsor.	Woodstock.
Grand Total.....	14,907	206	338	231	255	158	316	1459	430	261	974	172	1644	185	273	197	298	223	181	265	231	5884	112	465	149
I.—Endemic, Epidemic and Infectious Diseases.																									
Group Total.....	1918	30	38	36	39	17	37	213	63	36	136	16	261	23	34	24	49	29	31	46	19	650	13	67	11
1A. Typhoid fever.....	77	4	3	1	2		1	5	3		20	5	8	1	2				3	1		16	1	1	
1B. Paratyphoid fevers .	2												1			1									
5A. Malarial fever.....	1					1																			
6. Smallpox.....	5		2										3												
7. Measles.....	19				2			2		2	1							3	1	1		7			
8. Scarlet fever.....	75	1		1	4			3	4	2	4		8	2	10		2		2	3		27		1	1
9. Whooping cough.....	131		4	6	2			16		5	2	2	16	3	1		3		4	1	1	54	1	7	3
10. Diphtheria.....	326	2	8	2	2	1	3	42	6	11	22	2	52	5	8	1	10	11	6	16	3	98	3	12	
11A Influenza with pneumonic complications specified.....	76	5	1	2		1	1	7	6		5	2	2			3	1		2			35	1	1	1
11B. Influenza without pneumonic complications specified....	85	3	1		3	2	4	5	3		9		9		1	1	1	2	1	1	2	34		3	
13. Mumps.....	2												1				1								
15. Cholera nostras...	2												1						1						
16C. Dysentery due to other causes or of unspecified origin..	52	1		1		1		5	8		3		9	1						2		15		4	2
21. Erysipelas.....	48		1				4	4			3	1	3	1		1				1		28	1		
23. Encephalitis lethargica.....	33							1	4		4		2					1	1		2	16		2	
24. Meningococcal meningitis.....	1																			1					
25 Purulent infection, septicaemia.....	110			2	4	2	4	11	2	1	4		12	2	1	1	4	1	1	2	1	50	1	3	1
27. Anthrax.....	2												2												
29. Tetanus.....	12				1		1	1	2		1		2	1					2			1			
30. Mycoses.....	2								1											1					
31. Tuberculosis of the respiratory system	602	10	11	17	12	8	14	88	16	5	51	3	88	4	10	13	22	6	7	13	8	169	3	22	2
32. Tuberculosis of the meninges and central nervous system generally.....	66	1			2		2	8	2	3	1		12	3	1	1	3			1		22		4	
33. Tuberculosis of the intestines and peritoneum.....	37		3	1	3		1	3	2				5			1	1	1		1	1	7	1	5	1
34. Tuberculosis of the vertebral column...	13		1			1		2										2				7			
35. Tuberculosis of the joints.....	5										1		2									2			
36B. Tuberculosis of the bones (vertebral column excepted)...	5		2								2		1												
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	4	1							1				2												
36D. Tuberculosis of the genito-urinary system.	12			1				2		1	1		1									5	1		
36E. Tuberculosis of the organs other than the above.....	3																	1				2			
37A. Disseminated tuberculosis—acute.....	25	1	1	1				4	1	2			2			1						12			
37B. Disseminated tuberculosis—chronic.	1																1								
Total deaths from tuberculosis.....	773	13	18	20	17	9	17	107	22	11	56	3	113	7	11	16	27	10	7	15	9	226	5	31	3
38C. Syphilis, tertiary ..	3									1												2			
38D. Syphilis, hereditary	28				1		2		1	2			10									12			
38E. Syphilis, stage not indicated.....	39							4	1	1	2	1	4							1		23		2	

TABLE No. 11.—Continued.

OFFICIAL ENGLISH TRANSLATION. (DISEASES AND CAUSES OF DEATH).	Total.	Belleville.	Brantford.	Chatham.	Fort William.	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener.	London.	Niagara Falls.	Ottawa.	Owen Sound.	Peterboro.	Port Arthur.	St Catharines.	St Thomas.	Sarnia.	Sault Ste. Marie.	Stratford.	Toronto.	Wkland	Windsor.	Woodstock.
I.—ENDEMIC, EPIDEMIC AND INFECTIOUS DISEASES. —Continued.																									
40. Gonococcal infection (ophthalmia excepted)	5			1									1					1				2			
41. Gonorrhoeal or purulent ophthalmia	3	1																				2			
42. Other endemic, epidemic or infectious diseases	6				1								2								1	2			
II.—GENERAL DISEASES.																									
Group Total	1911	30	39	22	23	18	37	159	59	39	128	18	172	24	45	23	41	34	31	17	44	809	20	57	22
43. Malignant tumors of the buccal cavity	38				1			2	2		1		4	1	3						1	21		2	
44. Malignant tumors of the stomach and liver	402	7	10	5	3	7	12	38	9	9	30	6	28	2	11	7	13	7	7	6	15	150	5	11	4
45. Malignant tumors of peritoneum, intestines and rectum	193	2	4	4	5	1	3	16	6	2	12	2	13	2	4	1	3	3	2	1	1	99		5	2
46. Malignant tumors of the female genital organs	142	3	5	2	4	2		10	12	2	8	2	15	2	2	2	4	1	2	1	4	54	1	3	1
47. Malignant tumors of the breast	119	4	1	2	3		5	9	1		8		8	1	2		4	3	4	3	1	53	1	5	1
48. Malignant tumors of the skin	17								2		1		1				1	1	1			10			
49. Malignant tumors of other or unspecified organs	323	5	6	4	2	1	4	24	14	8	27	4	27	2	7	3	6	5	6		4	152	1	6	5
Total deaths from cancer	1234	21	26	17	18	11	24	99	46	21	87	14	96	10	29	13	31	20	22	11	26	539	8	32	13
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	21					1		3	1		2	1	1	1	1				2			8			
51. Rheumatic fever	66		3			1		4	1	3		1	8	1	2	2		1			2	35		1	1
52. Chronic rheumatism, osteo-arthritis, gout	50		1	1		2		3	1	1	4	1	9		1		1	1	1	1	1	17		4	
53. Scurvy	4							2		1					1							3			
54. Pellagra	4										1														
56. Rickets	9	1		1	1			1			1		2									1	1		
57. Diabetes	150	1	1	2	2		4	20	3	6	11	1	12	4	2	1	5	4	3	1	3	55	3	5	1
58A. Pernicious anaemia	154	2	4			2	2	7	4	3	11		19	2	5	2	2	5	1	1	5	62	5	6	4
58B. Other anaemias and chlorosis	42	1	1				3	4	1		4		6	1	1				1	1	3	13	1		1
60A. Exophthalmic goitre	30	2			1			5		1	1		4	1	2						2	9		2	
60B. Other diseases of the thyroid gland	35						3	3	1		3		4	1	1			1	1	1	1	11	1	1	2
62. Diseases of the thymus	2																						1	1	
63. Diseases of the adrenals	10	1	1					1			2					1						4			
64. Diseases of the spleen	7							1		1												5			
65A. Leukaemia	25	1	1			1		3					1			1	1	1		1		12		2	
65B. Lymphadenoma (Hodgkin's disease)	7		1		1			1					1									2		1	
66 Alcoholism (acute or chronic)	24							2	1	2	1		3	1		1	1	1				10		1	
67B. Chronic poisoning by other mineral substances	1												1												
69. Other general diseases	36			1			1						5	2		2					1	22		2	
III.—DISEASES OF THE NERVOUS SYSTEM.																									
Group Total	1336	10	26	20	13	24	43	119	29	15	134	10	117	14	16	16	27	31	13	28	30	546	6	33	16
70. Encephalitis	43			2	1	2		4	1		5		6					3		1	1	16		1	
71A. Meningitis	86		1		2	1	4	3	1	1	6		12	2	2	4	5	1		4	3	27		3	4
71B. Cerebrospinal meningitis	23			1	1	1				1	1		4				1			2	3	7		1	
72. Tabes dorsalis (locomotor ataxy)	14					1					2		2			1				1		7			
73. Other diseases of the spinal cord	103				1		3	13		1	7	1	5	1	1		2	5	3	1	5	51		3	

TABLE No. 11.—Continued.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Belleville.	Brantford.	Chatham.	Fort William.	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener.	London.	Niagara Falls.	Ottawa.	Owen Sound.	Peterboro	Port Arthur.	St. Catharines.	St. Thomas.	Sarnia.	Sault Ste Marie.	Stratford.	Toronto.	Welland.	Windsor.	Woodstock.
III.—Diseases of the Nervous System—Con.																									
74A. Cerebral haemorrhage, apoplexy	558	7	16	9	3	11	17	63	21	5	42	4	51	7	6	7	8	10	4	7	11	224	1	19	5
74B. Cerebral thrombosis and embolism	29	..	..	1	1	..	2	2	1	1	2	..	4	..	..	..	..	1	..	1	..	13	..	..	..
75A. Hemiplegia	76	..	..	1	..	1	1	4	2	..	9	..	7	..	1	1	1	..	1	2	..	44	..	..	1
75B. Other forms of paralysis	71	2	1	..	..	4	1	..	1	1	6	1	4	..	2	..	1	3	1	1	3	36	2	..	1
76. General paralysis of the insane	19	..	..	..	..	..	1	..	..	..	12	..	2	..	..	..	..	..	..	..	..	4	..	..	..
77. Other forms of mental alienation	55	1	1	1	..	..	4	5	..	..	21	..	1	..	..	..	1	..	1	..	..	19	..	..	..
78. Epilepsy	40	..	1	1	1	..	2	5	1	1	2	..	..	1	1	..	2	..	1	2	..	17	..	..	2
79. Convulsions (non-puerperal; 5 years and over)	7	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	1	1	..	1	..	..	1
80. Infantile convulsions (under 5 years of age)	78	..	2	1	2	3	3	8	..	2	8	2	5	1	3	..	5	4	1	2	2	21	1	1	1
81. Chorea	6	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2	1	..	..
82A. Hysteria and neurasthenia	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	1
82B. Neuritis	4	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	..	..	..
83. Cerebral softening	12	..	1	..	..	..	1	1	..	..	..	1	1	..	..	..	..	1	..	..	2	4	..	..	..
84 Other diseases of the nervous system	61	..	3	3	1	..	2	5	..	..	4	1	5	2	..	2	..	1	..	2	..	29	..	1	..
85D. Tumors of the eye	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
86A. Diseases of the ears	29	..	..	..	..	..	1	3	..	1	5	..	4	..	..	..	..	1	..	..	..	11	..	3	..
86B. Diseases of the mastoid process (or ears)	16	..	..	..	..	..	..	2	1	..	1	..	2	..	..	1	..	..	..	..	..	8	..	1	..
IV.—Diseases of the Circulatory System.																									
Group Total	2252	30	60	30	18	28	48	210	70	38	154	28	217	36	49	19	34	32	26	24	34	963	13	62	29
87. Pericarditis	8	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	4	..	..	..
88. Acute endocarditis and myocarditis	201	4	2	1	1	..	2	26	6	2	10	2	20	1	2	4	4	3	2	5	..	93	2	8	1
89 Angina pectoris	93	1	2	3	..	2	5	6	..	1	7	..	1	2	1	..	1	2	..	2	2	52	..	1	2
90 Other diseases of the heart	1129	20	30	14	11	21	20	111	30	21	65	10	130	21	26	10	22	16	11	11	22	458	6	28	15
91A. Aneurism	21	..	..	..	..	..	1	2	1	..	..	..	..	..	..	..	..	..	2	2	..	11	2	..	..
91B. Arteriosclerosis	713	4	23	12	4	4	16	57	31	13	63	15	59	11	19	3	6	11	11	4	7	304	3	22	11
92. Atheroma and other diseases of the arteries	14	..	..	..	..	..	2	..	..	..	1	..	2	..	1	..	..	..	..	..	..	8	..	..	..
93. Embolism and thrombosis (not cerebral)	30	1	..	..	1	..	2	1	..	..	4	..	3	..	..	1	..	..	..	..	1	16	..	..	..
94. Diseases of the veins (varices, haemorrhoids, phlebitis, etc.)	10	..	2	..	..	..	..	5	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
95. Diseases of the lymphatic system (lymphangitis, etc.)	17	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	11	..	3	..
96. Haemorrhage without determined cause; other diseases of the circulatory system	16	..	1	..	..	..	..	1	1	1	3	1	1	..	..	1	..	..	..	..	2	4	..	..	..
V.—Diseases of the Respiratory System.																									
Group Total	1798	20	35	31	30	21	35	223	65	32	99	25	170	17	25	21	36	22	19	21	17	765	9	53	7
97. Diseases of the nasal fossae and of their annexa	4	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..
98. Diseases of the larynx	14	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	1	..	..	..	..	8	..	..	1
99A. Bronchitis, acute	47	..	..	..	..	1	..	5	2	1	..	..	3	1	1	2	2	1	..	..	..	24	..	4	..
99B. Bronchitis, chronic	42	..	..	..	..	..	1	2	3	..	2	..	3	..	1	..	5	1	..	1	..	21	..	1	1
99C. Bronchitis, not otherwise defined, under 5 years of age	50	..	..	2	3	..	1	7	2	..	..	1	2	1	1	..	..	2	..	3	1	20	..	4	..
99D. Bronchitis, not otherwise defined, over 5 years of age	56	..	2	4	..	..	1	8	1	..	2	..	4	..	2	..	1	4	1	1	2	22	..	1	..

TABLE No. 11.—Continued.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Belleville.	Brantford.	Chatham.	Fort William	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener	London.	Niagara Falls	Ottawa.	Owen Sound.	Peterboro.	Port Arthur.	St. Catharines.	St. Thomas.	Sarnia.	Sault Ste. Marie.	Stratford	Toronto	Welland	Windsor	Woodstock
V. Diseases of the Respiratory System—Con.																									
100A. Broncho-pneumonia	425	5	4	4	7	1	4	57	18	8	11	9	44	3	4	3	10	4	7	5	1	195	5	14	2
100B. Capillary bronchitis	8	..	..	1	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	4	..	..	..
101A. Pneumonia, lobar	301	2	8	3	7	4	4	38	2	4	16	5	37	3	2	8	7	2	3	1	1	135	3	6	..
101B. Pneumonia, not otherwise defined	666	11	17	9	10	15	20	83	30	14	58	10	56	7	10	7	9	5	5	8	8	253	..	19	2
102. Pleurisy	57	..	1	1	..	..	1	8	1	1	4	..	4	1	..	..	1	2	..	..	1	31	..	..	..
103. Congestion and haemorrhagic infarct of the lung	37	..	..	1	..	..	2	1	3	1	4	..	8	..	..	..	..	..	..	1	2	10	..	3	1
104. Gangrene of the lung	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
105. Asthma	61	1	2	3	2	..	1	6	2	2	1	..	2	1	1	1	..	1	2	..	1	32	..	..	..
106. Pulmonary emphysema	4	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	25	..	..	3	1	..	..	6	..	..	..	..	2	..	3	..	..	..	..	1	1	6	1	1	..
VI.—Diseases of the Digestive System.																									
Group Total	1597	23	22	29	37	13	27	153	40	19	68	13	248	23	25	26	28	20	22	33	18	629	20	45	16
108A. Diseases of the teeth and gums	14	..	1	..	..	..	..	2	..	..	..	..	4	..	..	..	..	1	..	..	..	6	..	..	..
108B. Other diseases of the buccal cavity and annexa	11	1	..	1	..	..	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	5	..	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	60	1	2	2	3	..	2	1	2	..	4	..	7	..	2	..	..	..	1	..	1	26	..	4	2
110. Diseases of the oesophagus	7	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	4	..	..	..
111A. Ulcer of the stomach	44	..	..	1	..	..	1	2	2	..	3	..	5	..	..	..	..	..	1	3	..	21	1	3	1
111B. Ulcer of the duodenum	24	..	..	..	..	..	..	4	2	..	2	..	2	1	..	..	..	..	..	1	..	10	1	1	..
112. Other diseases of the stomach (cancer excepted)	108	4	..	3	1	..	..	4	3	..	2	1	26	2	2	4	2	..	2	1	..	43	2	5	1
113. Diarrhoea and enteritis (under 2 years)	603	8	4	10	20	3	6	67	10	4	17	8	98	8	7	16	14	7	7	11	8	249	4	15	2
114. Diarrhoea and enteritis (over 2 years)	81	3	2	2	..	..	3	8	2	..	6	..	10	3	2	3	1	1	..	2	..	32	1	..	..
117. Appendicitis and typhlitis	196	1	5	5	1	4	6	15	9	3	7	1	31	5	5	1	6	6	5	5	3	58	3	8	3
118A. Hernia	38	..	..	..	..	..	1	4	..	3	5	1	7	..	..	..	..	2	..	2	..	12	..	..	1
118B. Intestinal obstruction	119	1	2	1	2	2	3	16	3	3	7	..	11	2	2	1	..	1	3	3	4	45	3	4	..
119A. Diseases of the anus and stercoral fistulae	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
119B. Other diseases of the intestine	48	..	..	2	1	..	2	3	1	1	6	..	9	..	1	..	1	..	..	..	..	21	..	..	..
120 Acute yellow atrophy of the liver	3	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..
122B Cirrhosis, not returned as alcoholic	36	1	2	..	..	..	..	5	1	..	..	..	8	..	..	..	2	..	..	..	1	13	2	..	1
123. Biliary calculi	51	..	1	1	3	..	1	4	..	1	2	..	10	..	..	..	1	..	2	..	1	16	1	3	4
124. Other diseases of the liver	89	3	3	..	4	2	2	8	2	3	5	1	9	1	1	..	..	2	..	3	..	38	..	1	1
125. Diseases of the pancreas	4	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..
126. Peritonitis of unstated origin	46	..	..	1	1	..	1	4	1	1	..	..	7	1	1	..	1	..	1	2	..	23	..	1	..
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	14	..	..	..	1	..	..	3	2	..	1	..	2	..	..	..	..	..	..	..	..	5	..	..	..

TABLE No. 11.—Continued.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Belleville.	Brantford.	Chatham.	Fort William.	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener.	London.	Niagara Falls.	Ottawa.	Owen Sound.	Peterboro.	Port Arthur.	St. Catharines.	St. Thomas.	Sarnia.	Sault Ste. Marie.	Stratford.	Toronto	Welland.	Windsor.	Woodstock.
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa																									
Group Total	786	14	26	12	11	5	16	73	19	17	61	12	106	4	15	12	16	10	9	15	16	283	4	26	4
128. Acute nephritis	85	3	3	...	2	...	3	13	...	2	3	2	15	...	3	1	1	..	2	4	2	23	...	2	1
129. Chronic nephritis (Bright's disease)	404	8	11	4	7	2	6	35	10	9	35	5	46	1	8	5	6	5	5	9	10	159	2	14	2
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	60	..	1	..	...	1	3	7	1	1	6	...	9	...	2	3	1	1	1	...	1	18	1	2	1
132. Calculi of the urinary passages	10	..	..	1	..	..	1	3	..	..	..	..	3	..	..	..	..	..	..	..	..	2	..	..	..
133. Diseases of the bladder	51	1	1	3	...	1	3	1	1	3	2	...	8	...	1	1	2	2	..	1	2	18	...	...	..
134A. Stricture of the urethra	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
134B. Other diseases of the urethra	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..
135. Diseases of the prostate	84	1	8	1	1	..	..	4	3	...	10	2	18	1	...	1	5	1	1	...	1	21	...	5	..
136. Non-venereal diseases of the male genital organs	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..
137. Cysts and other benign tumors of the ovary	13	..	..	..	..	..	..	1	3	...	1	..	..	1	1	...	1	..	..	1	...	2	1	1	..
138. Salpingitis and pelvic abscess	16	..	..	2	1	1	..	2	..	1	..	..	1	..	..	1	..	..	..	..	..	7	..	..	..
139. Benign tumors of the uterus	21	..	1	..	..	..	..	4	1	...	2	2	1	..	..	..	..	..	..	..	..	10	..	..	..
140B. Non-puerperal uterine haemorrhage	5	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
141. Other diseases of the female genital organs	29	1	..	..	..	..	..	3	..	..	1	1	3	1	..	..	..	..	..	..	..	17	..	2	..
142. Non-puerperal diseases of the breast	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
VIII.—The Puerperal State.																									
Group Total	189	2	3	5	5	1	3	19	4	5	9	3	14	4	1	5	3	1	1	6	4	79	1	9	2
143A. Abortion	25	..	..	1	..	..	..	4	..	..	1	..	1	..	..	1	1	..	..	..	1	15	..	..	..
143B. Ectopic gestation	7	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	..	1	1
143C. Other accidents of pregnancy	28	..	..	3	..	..	1	1	1	..	1	..	2	..	..	1	..	..	..	2	..	12	1	3	..
144. Puerperal haemorrhage	20	..	..	1	..	1	..	2	..	1	..	1	1	2	..	2	..	1	..	..	..	6	..	2	..
145A. Caesarean section	3	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
145B. Other surgical operations and instrumental delivery	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
145C. Other accidents of labor	17	1	..	..	..	..	..	..	..	2	3	..	1	..	..	1	1	..	..	1	1	6	..	..	..
146. Puerperal sepsis	43	..	2	..	4	..	..	5	..	1	2	2	2	2	..	..	1	..	1	1	1	19	..	..	..
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	4	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..
148. Puerperal albuminuria and convulsions	33	1	1	..	..	..	2	6	2	1	1	..	4	..	1	..	..	..	..	1	..	12	..	1	..
149. Childbirth (without other explanation)	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	5	..	1	..
IX.—Diseases of the Skin and Cellular Tissue.																									
Group Total	90	..	2	2	1	..	2	12	6	1	9	..	10	1	4	1	1	2	..	1	2	31	..	..	2
151. Gangrene	40	..	1	..	1	..	..	6	2	1	5	..	5	1	1	1	..	2	..	1	1	11	..	..	1
152. Furuncle	7	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	4	..	..	..
153. Phlegmon, acute abscess	28	..	1	2	..	..	1	2	2	..	3	..	3	..	2	..	1	..	..	..	1	9	..	..	1
155. Other diseases of the skin and its annexa	15	..	..	..	..	..	1	2	2	..	1	..	1	..	1	..	..	..	..	..	..	7	..	..	..

TABLE No. 11.—Continued.

OFFICIAL ENGLISH TRANSLATION (Diseases and Causes of Death)	Total	Belleville.	Brantford	Chatham.	Fort William	Galt.	Guelph.	Hamilton.	Kingston.	Kitchener.	London.	Niagara Falls.	Ottawa.	Owen Sound.	Peterboro.	Port Arthur.	St. Catharines.	St. Thomas.	Sarnia.	Sault Ste. Marie.	Stratford.	Toronto.	Welland.	Windsor.	Woodstock.
X.—Diseases of the Bones and Organs of Locomotion.																									
Group Total	38	..	1	1	1	..	..	4	..	..	3	1	5	..	..	1	..	..	1	..	1	16	..	3	..
156. Diseases of the bones (tuberculosis and rickets excepted)	20	..	1	1	1	..	..	3	..	..	1	1	2	..	..	1	..	..	..	..	..	9	..	..	..
157. Diseases of joints (tuberculosis and rheumatism excepted)	13	..	..	..	..	..	..	1	..	..	1	..	3	..	..	..	..	..	1	..	1	4	..	2	..
158. Other diseases of the organs of locomotion	5	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	..	1	..
XI.—Malformations.																									
Group Total	212	..	8	..	9	5	7	21	6	4	10	3	19	4	6	2	5	2	3	2	1	83	1	7	4
159A. Congenital malformations not otherwise specified (stillbirths excepted)	105	..	2	..	..	3	4	11	3	1	3	1	12	2	6	1	4	1	1	1	1	42	..	4	2
159B. Hydrocephalus	14	..	1	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	8	..	1	..
159C. Congenital malformations of the heart	93	..	5	..	9	2	3	8	3	3	5	2	7	2	..	1	1	1	2	1	..	33	1	2	2
XII.—Diseases of Early Infancy.																									
Group Total	1341	21	29	17	35	8	21	126	32	22	72	18	183	18	21	21	26	15	11	32	17	520	11	53	12
160B. Congenital debility, icterus and sclerema	472	9	12	1	10	5	5	44	12	4	35	6	77	2	4	8	4	4	4	14	8	182	3	15	4
161A. Premature birth	643	10	15	15	20	3	15	48	14	17	27	7	83	10	6	11	16	8	5	15	6	247	6	31	8
161B. Injury at birth	115	..	2	..	2	..	1	19	3	1	5	2	8	2	6	2	4	1	1	1	2	47	2	4	..
162. Other diseases peculiar	110	2	..	1	3	..	..	15	3	..	5	3	15	4	5	..	2	2	1	1	1	44	..	3	..
163. Lack of care	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
164. XIII.—Old Age.																									
Group Total	421	12	21	11	1	8	13	26	13	17	41	3	22	11	12	2	11	14	5	8	14	137	4	5	10
XIV.—External Causes																									
Group Total	834	11	24	15	31	7	24	83	22	11	37	21	79	4	18	23	15	7	8	25	10	299	9	39	12
165 Suicide by solid or liquid poisons	13	..	..	..	..	..	..	1	..	1	1	..	1	..	1	..	..	..	..	..	..	6	..	2	..
166 Suicide by corrosive substances	6	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	3	..	..	..
167. Suicide by poisonous gas	5	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	..	..
168. Suicide by hanging or strangulation	10	..	..	..	..	..	2	..	1	1	1	..	..	..	1	..	..	..	..	..	..	4	..	..	..
169. Suicide by drowning	9	..	..	..	..	..	1	1	..	1	..	2	..	..	..	..	..	..	..	..	..	3	..	..	..
170. Suicide by firearms	13	..	..	..	..	..	1	3	1	..	..	1	1	..	..	..	..	..	..	1	..	5	..	..	1
171. Suicide by cutting or piercing instruments	12	..	1	..	..	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	6	..	..	..
172. Suicide by jumping from high places	4	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	..	..	..
174. Other suicides	4	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
175. Poisoning by food	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
177. Other acute accidental poisoning	37	..	1	1	..	..	..	3	1	..	3	..	2	..	1	1	..	..	2	1	1	15	1	4	..
178. Conflagration	13	..	..	2	..	..	..	..	4	..	..	..	2	..	..	..	..	..	..	4	..	1	..	..	..
179. Burns (conflagration excepted)	61	1	..	2	1	..	3	9	..	..	6	1	6	..	..	..	1	..	..	1	..	26	1	2	1
180. Accidental mechanical suffocation	15	..	..	1	..	..	..	2	..	..	1	..	1	..	..	..	..	..	..	1	..	7	..	1	1
181. Accidental absorption of irrespirable or poisonous gas	27	..	1	..	..	..	1	..	..	..	4	..	1	..	..	..	..	..	..	1	..	19	..	..	..
182. Accidental drowning	95	..	3	2	7	..	4	7	6	..	..	2	18	..	2	7	2	1	1	5	..	21	3	4	..

TABLE No. 11—Concluded

OFFICIAL ENGLISH TRANSLATION (Diseases and Causes of Death)	Total	Belleville	Brantford	Chatham	Fort William	Galt	Guelph	Hamilton	Kingston	Kitchener	London	Niagara Falls	Ottawa	Owen Sound	Peterboro	Port Arthur	St. Catharines	St. Thomas	Sarnia	Sault Ste. Marie	Stratford	Toronto	Welland	Windsor	Woodstock
XIV. External Causes —Continued																									
183. Accidental injury by firearms (war casualtiesexcepted)	21	..	..	..	1	1	..	3	2	..	..	2	1	..	..	1	..	..	1	..	..	5	..	3	1
184. Accidental inujry by cutting or piercing instruments	5	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	1	..	..	..	..	1	..	..	..
185. Accidental injury by fall	43	1	..	1	..	3	1	2	..	1	5	2	5	..	5	..	2	..	..	..	2	11	..	1	1
187. Accidental injury by machinery	7	..	..	..	1	..	..	2	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1
Other forms of crushing (vehicles, railways, landlides, etc)	148	6	3	2	7	..	4	17	..	1	3	4	11	..	..	7	5	3	1	3	3	51	1	13	3
188A. Railroad accidents	43	4	1	..	3	..	4	2	..	1	1	1	3	..	..	5	2	2	1	..	1	8	..	2	2
188B. Street car accidents	12	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	4	1	3	..
188C. Autom ol ile accidents	60	2	1	2	2	..	..	9	..	..	..	..	6	..	..	..	..	1	..	1	2	25	..	8	1
188F. Other accidental injuries by crushing, ing, etc	33	..	1	..	2	..	..	6	..	..	2	2	1	..	..	2	1	..	..	2	..	14	..	..	..
189. Injury by animals (poisoning excepted)	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	1	..	..
194. Excessive heat	45	1	3	..	..	1	..	7	1	..	3	..	4	..	1	..	1	..	..	1	..	22	..	..	..
195. Lightning	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
196. Electricity (lightning excepted)	18	..	..	..	3	1	..	..	..	1	1	2	1	1	..	..	1	..	..	..	1	5	..	1	..
197. Homicide by firearms	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
198. Homicide by cutting or piercing instruments	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
199. Homicide by other means	3	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1
200. Infanticide (murder of infants less than 1 year of age)	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
201C. Fracture (cause not specified)	139	1	5	2	7	..	3	10	4	4	5	2	10	2	5	..	1	..	2	3	2	66	2	2	1
202. Other external violence	68	1	7	2	2	..	3	8	2	1	2	1	10	1	1	3	..	3	1	1	..	13	..	5	1
203. Violent death of unknown causation	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XV.—Ill-Defined Diseases.																									
Group Total	184	3	4	..	1	3	3	18	2	5	13	1	21	2	2	1	6	4	1	7	4	74	1	6	2
204 Sudden death	20	..	..	..	..	..	..	4	1	..	1	..	7	..	..	..	1	..	..	1	..	4	..	..	1
205A. Cause of death unstated or ill-defined	164	3	4	..	1	3	3	14	1	5	12	1	14	2	2	1	5	4	1	6	4	70	1	6	1

TABLE No. 12.

Table Showing Total Deaths by Individual Diseases in each Town of 5,000 population and over, 1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Barrie.	Brockville.	Cobourg.	Collingwood.	Cornwall.	Eastview	Ford City	Hawkesbury	Ingersoll.	Kenora.	Lindsay.	Midland.	North Bay	Orillia.	Oshawa.	Pembroke.	Preston.	Smith's Falls	Sudbury.	Trenton.	Walkerville.	Waterloo.
Grand Total	**2273**	**119**	**177**	**116**	**92**	**175**	**41**	**56**	**80**	**89**	**52**	**116**	**93**	**130**	**127**	**154**	**119**	**43**	**130**	**166**	**68**	**54**	**76**
I.—Endemic, Epidemic and Infectious Diseases.																							
Group Total	319	10	29	13	14	19	4	9	9	7	13	11	14	20	10	27	11	11	25	36	11	7	9
1A. Typhoid fever	31	...	1	...	...	5	...	...	3	1	1	3	...	3	..	1	1	..	2	9	1	...	..
6. Smallpox	3	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1
7. Measles	1	...	1	...	...	...	...	...	...	...	...	...	...	2	...	2	...	1	...	2	1	...	1
8. Scarlet fever	11	...	1	...	...	...	...	...	...	...	1	...	...	2	...	2	...	1	...	2	1	...	...
9. Whooping cough	23	1	5	...	...	1	1	1	...	...	1	1	2	3	..	1	..	2	1	...	1	2	..
10. Diphtheria	52	1	1	2	2	5	1	1	...	1	2	1	2	7	..	2	2	2	5	11	..	1	3
11A. Influenza, with pneumonic complications specified	15	...	1	...	...	1	...	...	...	...	...	...	...	...	1	3	...	...	6	1	2	...	...
11B. Influenza, without pneumonic complications specified	18	...	...	...	...	1	...	...	...	...	2	2	...	...	2	5	1	3	1	1	..	...	...
15. Cholera nostras	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
16. Dysentery	1	...	...	...	..	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
16C. Dysentery, due to other causes or of unspecified origin	5	...	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...	...	...	1	...	...	...
21. Erysipelas	8	...	...	...	...	...	...	...	...	1	1	1	2	1	..	1	..	1	...	...	...	...	...
23. Encephalitis lethargica	4	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...
25. Purulent infection, septicaemia	7	...	...	...	2	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	..	2
29. Tetanus	3	...	...	...	1	...	...	...	1	..	...	...	...	...	...	...	...	...	...	...	1	...	...
31. Tuberculosis of the respiratory system	109	8	14	7	7	5	2	3	4	2	4	2	3	..	6	8	6	2	8	8	4	4	2
32. Tuberculosis of meninges and central nervous system generally	6	...	2	1	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	..
33. Tuberculosis of the intestines and peritoneum	9	...	...	2	...	1	...	...	1	...	...	...	...	1	...	...	1	...	1	2	...	...	..
34. Tuberculosis of the vertebral column	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
35. Tuberculosis of the joints	2	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	..
36C. Tuberculosis of the lymphatic system (mesenteric and retro-peritoneal glands excepted)	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
36. Tuberculosis of the genito-urinary system	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
36E. Tuberculosis of the organs other than the above	2	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	..
37A. Disseminated tuberculosis, acute	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	..
37B. Disseminated tuberculosis, chronic	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Total deaths from tuberculosis	133	8	19	11	9	6	2	4	5	3	5	2	4	3	6	8	7	2	9	10	4	4	2
38C. Syphilis, teritiary	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..	...	...	...	...	...
38E. Syphilis, stage not indicated	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
42. Other endemic, epidemic or infectious diseases	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
II.—General Diseases.																							
Group Total	264	10	27	13	16	29	1	1	8	16	4	21	8	12	23	14	12	3	11	10	7	10	8
43. Malignant tumors of the buccal cavity	7	...	...	...	...	1	...	...	...	1	...	1	...	...	1	2	...	...	...	...	...	1	..
44. Malignant tumors of the stomach and liver	60	4	6	3	2	7	...	...	5	2	3	3	1	3	5	3	1	1	4	3	..	1	3
45. Malignant tumors of the peritoneum, intestines and rectum	33	...	3	4	2	6	...	...	...	3	...	1	2	1	2	2	1	...	..	1	2	1	2
46. Malignant tumors of the female genital organs	13	...	2	...	...	4	...	...	2	1	1	...	...	...	2	1	...	...	...	...	...	...	...
47. Malignant tumors of the breast	12	1	3	...	4	1	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...
48. Malignant tumors of the skin	3	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
49. Malignant tumors of other or unspecified organs	48	2	9	2	1	2	...	...	1	5	...	9	3	2	1	...	2	...	3	...	2	2	2
Total deaths from cancer	176	7	23	9	9	22	...	...	8	12	4	14	7	6	13	8	5	1	7	4	5	5	7
51. Rheumatic fever	6	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	1	..
52. Chronic rheumatism, osteo-arthritis, gout	9	2	...	...	2	1	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	1	..

TABLE No. 12.—Continued

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total	Barrie.	Brockville.	Cobourg.	Collingwood	Cornwall.	Eastview.	Ford City.	Hawkesbury.	Ingersoll.	Kenora.	Lindsay.	Midland.	North Bay.	Orillia.	Oshawa.	Pembroke.	Preston.	Smith's Falls.	Sudbury.	Trenton.	Walkerville.	Waterloo.
II.—General Diseases.—Con.																							
56. Rickets	1																			1			
57. Diabetes	16		1	1	2	3								2	2	2	1	1		1			
58A. Pernicious anaemia	19			1	2	2				1		1	1	2	2	1	1	3	1	1	1		
58B. Other anaemias and chlorosis	7			1	1							3		1		1							
60A. Exophthalmic goitre	4	1	1									1				1							
60B. Other diseases of the thyroid gland	4														1	1			1		1		
63. Diseases of the adrenals	1														1								
65A. Leukaemia	3									2													1
66. Alcoholism (acute or chronic)	6						1					1			1			1	1		1		
67A. Chronic lead poisoning	1									1													
69. Other general diseases	11		1	1				1						2	3	1	1			1			
III.—Diseases of the Nervous System.																							
Group Total	238	13	22	21	13	23	2	3	4	12	3	14	13	6	19	15	6	6	10	9	8	6	10
70. Encephalitis	1									1													
71A. Meningitis	13			1	2	2	2		1		1				1					1	1	1	
71B. Cerebrospinal meningitis	5					2						1				1				1			
72. Tabes dorsalis (locomotor ataxy)	4	1	2														1						
73. Other diseases of the spinal cord	14	2	1		1	1						1		1	1			1	3				2
74A. Cerebral haemorrhage, apoplexy	107	7	12	6	8	12		3	1	6	1	8	8	1	7	5	1	5	2	2	3	3	6
74B. Cerebral thrombosis and embolism	7		2												4							1	
75A. Hemiplegia	7	1												1	1	1	1			2			
75B. Other forms of paralysis	23	1	1	1	1	1			1	3	1	1	4			4			2			1	1
76. General paralysis of the insane	1					1																	
77. Other forms of mental alienation	12			6	1	1						1				1				2			
78. Epilepsy	9		1	4										1	2					1			
79. Convulsions (non-puerperal; 5 years and over)	2									1		1											
80. Infantile convulsions (under 5 years of age)	21		3	1		2			1	1		1	1	2	3	1	1		1	1	1		1
82A. Hysteria and neuralgia	1																				1		
82B. Neuritis	1	1																					
83. Cerebral softening	3			2												1							
84. Other diseases of the nervous system	5					1											2		2				
86A. Diseases of the ears	1															1							
86B. Diseases of the mastoid process (or sinus)	1																			1			
IV.—Diseases of the Circulatory System.																							
Group Total	278	18	25	18	7	15	5	6	10	10	7	16	8	19	19	16	13	5	19	10	11	6	15
88. Acute endocarditis and myocarditis	19		3		1	1	1					1	1	1	4	3	1	1				1	
89. Angina pectoris	13	1	2				1	1	1	1				3	1						1		1
90. Other diseases of the heart	151	12	18	12	3	8		3	6	8	1	5	3	10	9	9	7	3	12	6	4	4	8
91A. Aneurism	1													1									
91B. Arteriosclerosis	86	4	2	5	3	5	2	2	3	1	6	8	3	4	5	4	4	1	7	4	6	1	6
92. Atheroma and other diseases of the arteries	2					1					1												
93. Embolism and thrombosis (not cerebral)	4	1										1	1				1						
95. Diseases of the lymphatic system (lymphangitis, etc.)	1						1																
96. Haemorrhage without determined cause; other diseases of the circulatory system	1			1																			
V.—Diseases of the Respiratory System.																							
Group Total	239	12	23	13	9	18	3	8	12	7	5	14	8	18	9	15	11	1	17	18	3	7	8
98. Diseases of the larynx	4							1				1		1		1							
99A. Bronchitis, acute	1						1																
99B. Bronchitis, chronic	2				1				1														
99C. Bronchitis not otherwise defined under 5 years of age	7		1	1	2						1			2									
99D. Bronchitis not otherwise defined over 5 years of age	10		1	2	1								2		1				1	1			1

TABLE No. 12—Continued.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Barrie.	Brockville.	Cobalt.	Collingwood.	Cornwall.	Eastview.	Ford City.	Hawkesbury.	Ingersoll.	Kenora.	Lindsay.	Midland.	North Bay	Orillia.	Oshawa.	Pembroke.	Preston.	Smith's Falls.	Sudbury.	Trenton.	Walkerville.	Waterloo.
V.—Diseases of the Respiratory System.—Continued.																							
100A. Brocho-pneumonia	59	6	5	1	1	6		4	3	1		3	2	2		3	2		5	6	1	4	4
101A. Pneumonia, lobar	25		2	2	1	2			2				1	4	1	1			6			2	1
101B. Pneumonia not otherwise defined	112	5	13	6	3	6	2	3	5	5	4	9	2	8	6	9	1	1	5	8	1	1	2
102. Pleurisy	8	1				3				1				1						2			
103. Congestion and haemorrhagic infarct of the lung	3					1						1	1										
105. Asthma	5			1					1								1			1	1		
106. Pulmonary emphysema	1		1																				
107B. Diseases of the mediastinum	1														1								
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	1															1							
VI.—Diseases of the Digestive System.																							
Group Total	272	13	14	11	9	21	13	8	13	8	4	8	15	17	13	17	25	3	18	25	6	5	6
108A. Diseases of the teeth and gums	1												1										
108B. Other diseases of the buccal cavity and its annexa	1		1																				
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	3	1																		2			
110. Diseases of the oesophagus	1																		1				
111A. Ulcer of the stomach	6					2								1	1				1				1
111B. Ulcer of the duodenum	4	1				1				1										1			
112. Other diseases of the stomach (cancer excepted)	17	1	1	3										3		2	2	1	1	2	1		
113. Diarrhoea and enteritis (under 2 2 years)	110	4	2	2	2	4	12	7	7	5	2	2	7	7	4	10	8	1	5	10	4	3	2
114. Diarrhoea and enteritis (over 2 years)	21	1	2	2	1		1		1	1		1	2	1	1		3	1		2		1	
116E. Other parasites of the intestines	1												1										
117. Appendicitis and typhlitis	47	2	4	2	3	7			4			2	3	2	4	1	5		3	5			
118A. Hernia	6										1				2				3				
118B. Intestinal obstruction	17	1		2	1	3		1		1		1	1	1		1	2			1		1	
119B. Other diseases of the intestine	7	1			1	2						1								1			1
120. Acute yellow atrophy of the liver	1																						1
122B. Cirrhosis not returned as alcoholic	4		1								1						1						1
123. Biliary calculi	4	1			1										1				1				
124. Other diseases of the liver	10		1			1			1					2		2			2		1		
125. Diseases of the pancreas	1		1																				
126. Peritonitis of unstated origin	9		1			1						1				1	4		1				
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1																			1			
VII.—Non-Venereal Diseases of Genito-Urinary System and Its Annexa.																							
Group Total	105	9	7	4	3	9		3	3	4	3	7	4	2	8	6	7	2	4	10	2	4	4
128. Acute nephritis	9					1		1							3		1			3			
129. Chronic nephritis (Bright's Disease)	65	8	4	2	2	7		2	1	3	1	5	2	1	2	6	5		1	5	1	3	4
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	5		1								1		1						1			1	
133. Diseases of the bladder	5	1		1					1						1						1		
135. Diseases of the prostate	15		1	1	1	1			1	1		2	1		1		1	1	2	1			
136. Non-venereal diseases of the male genital organs	1														1								
138. Salpingitis and pelvic abscess	3									1								1		1			
139. Benign tumors of the uterus	1													1									
141. Other diseases of the female genital organs	1		1																				
VIII.—The Puerperal State.																							
Group Total	26	2				3			1	2	1	1		1	2	3	1	2	2	4		1	
143A. Abortion	3									1				1	1								
143B. Ectopic gestation	2					1				1													

TABLE No. 12.—Continued.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Barrie.	Brockville.	Cobourg.	Collingwood.	Cornwall.	Eastview.	Ford City.	Hawkesbury.	Ingersoll.	Kenora.	Lindsay.	Midland.	North Bay.	Orillia.	Oshawa.	Pembroke.	Preston.	Smith's Falls.	Sudbury.	Trenton.	Walkerville.	Waterloo.
VIII.—The Puerperal State.—Con.																							
143c. Other accidents of pregnancy	5					1					1	1					1		1				
144. Puerperal haemorrhage	4															1				3			
145a. Caesarean section	1																		1				
145c. Other accidents of labor	2															1						1	
146. Puerperal sepsis	2														1	1							
148. Puerperal albuminuria and convulsions	6	2				1			1									1		1			
149. Childbirth (without other explanation)	1																		1				
IX.—Diseases of the Skin and Cellular Tissue.																							
Group Total	5				2				1								1		1				
151. Gangrene	2				1												1						
153. Phlegmon, acute abscess	3				1				1										1				
X.—Diseases of the Bones and Organs of Locomotion.																							
Group Total	4																		3	1			
156. Diseases of the bones (tuberculosis and rickets excepted)	3																		2	1			
158. Other diseases of the organs of locomotion	1																		1				
XI.—Malformations.																							
Group Total	34	1	3	1	1	2		1		2	1	1	3	4	2	5		3	3				1
159a. Congenital malformations not otherwise specified (still-births excepted)	13	1			1					2				1	1	3		3					1
159b. Hydrocephalus	3										1		1			1							
159c. Congenital malformations of the heart	18		3	1		2		1				1	2	3	1	1			3				
XII.—Diseases of Early Infancy.																							
Group Total	224	11	12	6	3	11	10	12	17	9	3	9	9	15	7	24	14	5	10	20	10	4	3
160b. Congenital debility, icterus and scleroma	78	4	7	5	2	3	3	3	10	2	2	1	2	1	2	6	3	2	3	9	7	1	
161a. Premature birth	111	5	3	1	1	8	6	8	6	5	1	5	5	9	3	15	7	3	5	9	2	1	3
161b. Injury at birth	15	2	1									2		2	1	2	3		1	1			
162. Other diseases peculiar to early infancy	19		1				1	1	1	2		1	2	3	1	1			1	1	1	2	
163. Lack of care	1																1						
XIII.—Old Age.																							
164. Senility total	95	10	5	10	2	12	1		1	6	2	8	3	2	5	4	7			2	4	1	9
XIV.—External Causes.																							
Group Total	136	8	8	6	13	9		5	1	5	4	4	8	11	7	5	6	2	7	18	5	3	1
168. Suicide by hanging or strangulation	3										1								1	1			
170. Suicide by firearms	2															1					1		
171. Suicide by cutting or piercing instruments	2																		1	1			
175. Poisoning by food	3	1												1							1		
177. Other acute accidental poisonings	1																			1			
178. Conflagration	2		2																				
179. Burns (conflagration excepted)	6			1		1		1					1	1		1							
180. Accidental mechanical suffocation	2												1	1									
181. Accidental absorption of irrespirable or poisonous gas	1					1																	
182. Accidental drowning	23		2	1	1	1		1		1	1		2	4	1		1	1	1	3	1	1	
183. Accidental injury by firearms (war casualties excepted)	3				1	1						1											

TABLE No. 12.—Concluded.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Total.	Barrie.	Brockville.	Cobourg.	Collingwood.	Cornwall.	Eastview.	Ford City.	Hawkesbury.	Ingersoll.	Kenora.	Lindsay.	Midland.	North Bay.	Orillia.	Oshawa.	Pembroke.	Preston.	Smith's Falls.	Sudbury.	Trenton.	Walkerville.	Waterloo.
XIV.—External Causes.—Con.																							
184. Accidental injury by cutting or piercing instruments	1														1								
185. Accidental injury by fall	9	1		1	2	1								1			1				1		1
186a. Accidental injury in mines	1										1												
187. Accidental injury by machinery	1															1							
Other forms of crushing (vehicles, railways, landslides, etc.)	25	4	1		3			1			1				1	1	2	1	1	6	1	2	
188a. Railroad accidents	8				1						1				1		1		1	2	1		
188b. Street car accidents	1																	1					
188c. Automobile accidents	10	2	1		2			1								1	1					2	
188d. Aeroplane and balloon accidents	2	2																					
188f. Other accidental injuries by crushing, etc.	4																			4			
189. Injury by animals (poisoning excepted)	3											1				1			1				
193. Excessive cold	1																1						
194. Excessive heat	7	1	1							1		1		2	1								
196. Electricity (lightning excepted)	1							1															
197. Homicide by firearms	1													1									
201c. Fracture (cause not specified)	17	1	2	3	1			1	1			2	1				1		1	3			
202. Other external violence	21				5	4				3			1	1	3				1	3			
XV.—Ill-Defined Diseases.																							
Group Total	34	2	2			4	2			1	2	2		3	3	3	5			2	1		2
204. Sudden death	5	1				1						1			1								1
205a. Cause of death unstated or ill-defined	29	1	2			3	2			1	2	1		3	2	3	5			2	1		1

TABLE No. 13.

Deaths under 5 years of Age, and Causes, 1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death.)	Province.						Cities.						Towns.						Rural Municipalities.					
	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.
Grand Total.....	8,553	6,763	827	390	291	282	3,884	3,044	401	169	133	137	614	494	61	23	21	15	4,055	3,225	365	198	137	130
I.—Endemic, Epidemic and Infectious Diseases.																								
Group Total.....	1165	562	204	163	130	106	550	253	106	86	54	51	69	29	15	10	8	7	546	280	83	67	68	48
1A. Typhoid fever.....	8	1	1	...	5	1	4	1	1	..	2	..	...	...	...	...	...	...	4	...	...	...	3	1
3. Relapsing fever (spirillum obermeieri).....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	..
6. Smallpox.....	7	5	...	...	1	1	3	2	...	...	1	...	...	...	...	...	...	...	4	3	...	...	...	1
7. Measles.....	37	17	13	2	2	3	17	7	7	2	...	1	...	...	...	...	...	...	20	10	6	..	2	2
8. Scarlet fever.....	63	4	7	17	20	15	36	3	5	9	10	9	6	...	...	3	1	2	21	1	2	5	9	4
9. Whooping cough.....	300	211	54	21	9	5	126	82	24	11	5	4	22	15	5	1	1	..	152	114	25	9	3	1
10. Diphtheria.....	275	33	46	69	64	63	149	20	28	42	28	31	22	4	6	3	5	4	104	9	12	24	31	28
11A. Influenza with pneumonic complications specified..	39	20	11	5	1	2	13	6	5	2	...	...	4	2	1	...	...	1	22	12	5	3	1	1
11B. Influenza without pneumonic complications specified.....	66	47	8	5	4	2	13	9	1	..	2	1	...	...	...	...	...	...	53	38	7	5	2	1
13. Mumps.....	2	1	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
15. Cholera nostras.....	12	7	4	1	...	...	2	...	2	...	...	...	...	...	...	...	...	...	10	7	2	1	...	...
16C. Dysentery due to other causes or of unspecified origin.....	85	60	13	5	5	2	30	23	7	...	...	...	2	2	...	...	...	...	53	35	6	5	5	2
21. Erysipelas.....	33	29	3	1	...	...	21	18	3	...	...	...	3	3	...	...	...	...	9	8	...	1	...	...
23. Encephalitis lethargica...	5	...	2	2	...	1	4	...	1	2	...	1	...	...	...	...	...	...	1	...	1	...	...	...
25. Purulent infection, septicaemia.....	30	23	4	1	...	2	20	16	3	...	...	1	1	...	...	1	...	...	9	7	1	...	...	1
29. Tetanus.....	6	1	...	2	3	...	1	1	...	...	...	...	1	...	...	...	1	...	4	...	...	2	2	..
31. Tuberculosis of the respiratory system.....	41	12	5	12	8	4	11	4	1	4	1	1	2	...	..	2	...	..	28	8	4	6	7	3.
32. Tuberculosis of the meninges and central nervous system generally...	68	29	21	8	5	5	37	15	11	5	4	2	4	2	2	...	...	...	27	12	8	3	1	3
33. Tuberculosis of the intestines and peritoneum....	12	4	4	3	1	..	5	2	1	2	...	...	1	...	1	...	...	...	6	2	2	1	1	..
34. Tuberculosis of the vertebral column.....	3	...	..	2	1	...	2	...	..	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...
35. Tuberculosis of the joints.	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted).....	4	1	2	1	...	...	2	1	...	1	...	...	...	...	...	...	...	...	2	...	2	...	...	...
37A. Disseminated tuberculosis—acute.....	13	7	4	2	...	...	10	4	4	2	...	...	...	...	...	...	...	...	3	3	...	...	...	...
Total deaths from tuberculosis	142	54	36	28	15	9	68	27	17	15	6	3	7	2	3	2	...	...	67	25	16	11	9	6.
38D. Syphilis, hereditary.....	35	32	2	1	...	...	28	25	2	1	...	...	...	...	...	...	...	...	7	7	...	...	...	...
38E. Syphilis, stage not indicated.....	7	6	..	1	...	...	5	4	..	1	...	...	...	...	...	...	...	...	2	2	...	...	...	...
41. Gonorrhoeal or purulent ophthalmia.....	3	3	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
42. Other endemic, epidemic or infectious diseases....	9	8	...	1	...	...	6	5	...	1	...	...	1	1	...	...	...	...	2	2	...	...	...	...
II.—General Diseases.																								
Group Total.....	113	63	17	12	6	15	51	26	8	5	2	10	13	11	..	1	1	..	49	26	9	6	3	5
45. Malignant tumors of the peritoneum, intestines and rectum.....	1	...	..	..	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
49. Malignant tumors of other or unspecified organs.	6	...	1	1	1	3	5	...	1	1	1	2	...	...	...	...	...	...	1	...	...	...	...	1
Total deaths from cancer....	8	1	1	1	2	3	5	...	1	1	1	2	1	...	...	...	1	..	1	...	...	...	...	1
50. Benign tumors and tumors not returned as malignant (tumors of the female genital organs excepted).....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	..	...	...	...

TABLE No. 13.—Continued

Deaths Under 5 Years of Age, and Causes, 1921.

OFFICIAL ENGLISH TRANSLATION (Diseases and Causes of Death.)	Province.						Cities.						Towns.						Rural Municipalities.					
	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.
II.—General Diseases—Con.																								
51. Rheumatic fever	4	1				3	3					3							1	1				
53. Scurvy	6	4	1		1		4	2	1		1								2	2				
56. Rickets	22	17	5				9	8	1				1		1				12	8	4			
57. Diabetes	9	2	1	3		3	1					1		1					7	1	1	3		2
58A. Pernicious anaemia	3	1	2				2		2										1	1				
58B. Other anaemias and chlorosis	7	5	1	1			4	3	1				1			1			2	2				
59. Diseases of the pituitary gland	1			1															1			1		
60B. Other diseases of the thyroid gland	1	1																	1	1				
62. Diseases of the thymus	3	3					2	2											1	1				
64. Diseases of the spleen	2			1	1														2			1	1	
65A. Leukaemia	10	2	3	1	2	2	5	1	2	1		1	1	1					4		1		2	1
69. Other general diseases	37	26	3	4		4	16	10		3		3	8	8					13	8	3	1		1
III.—Diseases of the Nervous System.																								
Group Total	445	320	63	27	16	19	197	146	25	11	6	9	35	21	9	2	2	1	213	153	29	14	8	9
70. Encephalitis	10	4	1	1	1	3	5	3	1		1								5	1		1		3
71A. Meningitis	99	59	18	8	6	8	43	26	11	2		4	5	1	1	1	1	1	51	32	6	5	5	3
71B. Cerebrospinal meningitis	25	11	8	1	4	1	10	5	3		1	1	4	1	2	1			11	5	3		3	
73. Other diseases of the spinal cord	19	6	5	5		3	8	3	1	2		2	2	1	1				9	2	3	3		1
74A. Cerebral haemorrhage, apoplexy	35	32	2	1			23	22		1									12	10	2			
74B. Cerebral thrombosis and embolism	1			1															1			1		
75A. Hemiplegia	3	2			1		2	1			1		1	1										
75B. Other forms of paralysis	2	1	1				1		1										1	1				
77. Other forms of mental alienation	1	1																	1	1				
78. Epilepsy	7	4	1	1		1	2	1	1										5	3		1		1
80. Infantile convulsions (under 5 years of age)	202	170	23	5	2	2	78	66	7	2	1	2	21	16	4		1		103	88	12	3		
84. Other diseases of the nervous system	20	14	2	2	1	1	11	8		2	1		2	1	1				7	5	1			1
85D. Tumors of the eye	1				1		1				1													
86A. Diseases of the ears	17	13	2	2			10	8		2									7	5	2			
86B. Diseases of the mastoid process (or sinus)	3	3					3	3																
IV.—Diseases of the Circulatory System.																								
Group Total	74	45	12	6	6	5	37	20	5	3	5	4	4	1	1	1	1		33	24	6	2		1
87. Pericarditis	2	1			1		1				1								1	1				
88. Acute endocarditis and myocarditis	14	7	2	3	2		5	1	1	1	2		1		1				8	6		2		
89. Angina pectoris	1	1																	1	1				
90. Other diseases of the heart	24	12	6	2	1	3	7	3		1	1	2	2	1		1			15	8	6			1
92. Atheroma and other diseases of the arteries	1	1																	1	1				
93. Embolism and thrombosis (not cerebral)	3	3					1	1											2	2				
95. Diseases of the lymphatic system (lymphangitis, etc.)	20	13	4	1	1	1	17	11	4	1		1	1				1		2	2				
96. Haemorrhage without determined cause; other diseases of the circulatory system	9	7			1	1	6	4			1	1							3	3				
V.—Diseases of the Respiratory System.																								
Group Total	1161	825	202	61	34	39	527	357	108	28	17	17	76	55	14	4	2	1	558	413	80	29	15	21
97. Diseases of the nasal fossae and of their annexa	3	2				1	3	2				1												
98. Diseases of the larynx	29	12	2	5	5	5	9	3		2	2	2	3	2				1	17	7	2	3	3	2

TABLE No. 13.—Continued.

Deaths Under 5 Years of Age, and Causes, 1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death.)	Province.						Cities						Towns.						Rural Municipalities.					
	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Totals.	Under 1 Yr	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.
V.—Diseases of the Respiratory System.—Con.																								
99A. Bronchitis, acute	40	29	7	2	1	1	21	13	6	2	..	..	..	..	..	..	..	..	19	16	1	..	1	1
99B. Bronchitis, chronic	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
99C. Bronchitis not otherwise defined under 5 years of age	117	95	16	..	1	5	50	39	8	..	1	2	7	5	2	..	..	..	60	51	6	..	..	3
100A. Broncho-pneumonia	490	356	93	25	11	5	255	177	56	12	5	5	28	20	6	1	1	..	207	159	31	12	5	..
100B. Capillary bronchitis	19	13	3	2	..	1	6	5	..	1	..	..	..	..	..	..	..	..	13	8	3	1	..	1
101A. Pneumonia, lobar	71	41	17	5	1	7	37	19	12	3	1	2	4	2	2	..	..	..	30	20	3	2	..	5
101B. Pneumonia not otherwise defined	368	261	61	22	12	12	132	91	24	8	5	4	34	26	4	3	1	..	202	144	33	11	6	8
102. Pleurisy	5	..	..	..	3	2	4	..	..	..	3	1	..	..	..	..	..	..	1	..	..	..	..	1
103. Congestion and haemorrhagic infarct of the lung	14	13	1	..	..	..	7	6	1	..	..	..	..	..	..	..	..	..	7	7	..	..	..	..
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	4	3	1	..	..	..	3	2	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
VI.—Diseases of the Digestive System.																								
Group Total	1668	1286	225	62	48	47	764	595	107	17	22	23	137	105	19	5	5	3	767	586	99	40	21	21
108A. Diseases of the teeth and gums	21	14	6	..	..	1	8	5	3	..	..	..	1	1	..	..	..	..	12	8	3	..	..	1
108B. Other diseases of the buccal cavity and its annexa	8	5	2	..	1	..	3	..	2	..	1	..	1	1	..	..	..	..	4	4	..	..	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation	39	12	12	5	5	5	25	7	9	3	2	4	1	..	..	..	1	..	13	5	3	2	2	1
110. Diseases of the oesophagus	2	1	..	1	..	..	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
112. Other diseases of the stomach (cancer excepted	49	33	3	3	7	3	23	15	2	1	3	2	5	4	..	..	1	..	21	14	1	2	3	1
113. Diarrhoea and enteritis (under 2 years)	1326	1143	183	..	..	..	603	522	81	..	..	..	110	94	16	..	..	..	613	527	86	..	..	..
114. Diarrhoea and enteritis (over 2 years)	76	..	..	40	20	16	23	..	..	7	9	7	4	..	..	2	1	1	49	..	..	31	10	8
116E. Other parasites of the intestines	3	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	1	1
117. Appendicitis and typhlitis	26	1	2	4	8	11	11	1	2	2	2	4	5	..	..	1	2	2	10	..	..	1	4	5
118A. Hernia	13	9	2	1	..	1	7	6	1	..	..	..	2	..	1	1	..	..	4	3	..	..	..	1
118B. Intestinal obstruction	56	40	9	..	2	5	37	26	6	..	2	3	4	3	1	..	..	..	15	11	2	..	..	2
119B. Other diseases of the intestine	21	11	2	7	..	1	9	5	..	3	..	1	2	1	..	1	..	..	10	5	2	3	..	..
120. Acute yellow atrophy of the liver	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
124. Other diseases of the liver	9	5	2	..	1	1	3	2	..	..	1	..	1	..	1	..	..	..	5	3	1	..	..	1
126. Peritonitis of unstated origin	16	11	1	..	2	2	9	4	1	..	2	2	1	1	..	..	..	..	6	6	..	..	..	..
127. Other diseases of the digestive system (cancer and tuberculosis excepted	2	1	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																								
Group Total	61	35	7	11	2	6	29	19	3	4	1	2	1	1	..	..	..	..	31	15	4	7	1	4
128. Acute nephritis	49	27	5	11	1	5	23	15	2	4	..	2	1	1	..	..	..	..	25	11	3	7	1	3
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	11	8	1	..	1	1	6	4	1	..	1	..	..	..	..	..	..	..	5	4	..	..	..	1
133. Diseases of the bladder	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..

TABLE No. 13.—Concluded.

Deaths Under 5 Years of Age, and Causes, 1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death.)	Province.						Cities.						Towns.						Rural Municipalities.					
	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Years.	2 Year.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year	2 Years.	3 Years.	4 Years.	Total	Under 1 Yr.	1 Years.	2 Years.	3 Years.	4 Years.
IX.—Diseases of the Skin and Cellular Tissue.																								
Group Total	28	25	1	1	1	..	19	17	1	..	1	..	1	1	..	..	..	..	8	7	..	1	..	..
151. Gangrene	2	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
152. Furuncle	3	3	..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
153. Phlegmon, acute abscess	9	9	..	..	..	..	6	6	..	..	..	..	1	1	..	..	..	..	2	2	..	..	..	..
155. Other diseases of the skin and its annexa	14	11	1	1	1	..	9	7	1	..	1	..	..	..	..	..	..	..	5	4	..	1	..	..
X.—Diseases of the Bones and Organs of Locomotion.																								
Group Total	9	4	1	..	3	1	8	4	1	..	2	1	1	..	..	..	1	..	..	..	..	..	..	..
156. Diseases of the bones (tuberculosis and rickets excepted)	6	2	1	..	1	2	5	2	1	..	1	1	1	..	..	..	1	..	..	..	..	..	..	..
157. Diseases of the joints (tuberculosis and rheumatism excepted)	2	2	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
158. Other diseases of the organs of locomotion	1	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
XI.—Malformations.																								
Group Total	488	470	14	3	1	..	209	204	5	..	..	..	34	32	1	..	1	..	245	234	8	3	..	..
159A. Congenital malformations not otherwise specified (still-births excepted)	256	248	7	1	..	..	105	103	2	..	..	..	13	13	..	..	..	..	138	132	5	1	..	..
159B. Hydrocephalus	37	35	1	1	..	..	14	14	..	..	..	..	3	3	..	..	..	..	20	18	1	1	..	..
159C. Congenital malformations of the heart	195	187	6	1	1	..	90	87	3	..	..	..	18	16	1	..	1	..	87	84	2	1	..	..
XII.—Diseases of Early Infancy.																								
Group Total	2908	2908	..	..	..	..	1341	1341	..	..	..	..	224	224	..	..	..	..	1343	1343	..	..	..	..
160B. Congenital debility, icterus and scleroma	1029	1029	..	..	..	..	472	472	..	..	..	..	78	78	..	..	..	..	479	479	..	..	..	..
161A. Premature birth	1407	1407	..	..	..	..	643	643	..	..	..	..	111	111	..	..	..	..	653	653	..	..	..	..
161B. Injury at birth	223	223	..	..	..	..	115	115	..	..	..	..	15	15	..	..	..	..	93	93	..	..	..	..
162. Other diseases peculiar to early infancy	244	244	..	..	..	..	110	110	..	..	..	..	19	19	..	..	..	..	115	115	..	..	..	..
163. Lack of care	5	5	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	3	3	..	..	..	..
XIV.—External Causes.																								
Group Total	239	68	53	39	38	41	99	23	21	15	20	20	11	7	1	..	..	3	129	38	31	24	18	18
175. Poisoning by food	6	3	..	1	1	1	2	1	..	..	..	1	1	1	..	..	..	..	3	1	..	1	1	..
177. Other acute accidental poisonings	21	2	10	4	3	2	11	..	6	2	1	2	..	..	..	..	..	..	10	2	4	2	2	..
178. Conflagration	11	4	1	2	2	2	3	1	..	..	1	1	1	..	..	..	..	1	7	3	1	2	1	..
179. Burns (conflagration excepted)	56	10	14	11	11	10	29	3	7	6	8	5	1	..	1	..	..	..	26	7	6	5	3	5
180. Accidental mechanical suffocation	21	20	1	..	..	..	9	9	..	..	..	..	2	2	..	..	..	..	10	9	1	..	..	..
181. Accidental absorption of irrespirable or poisonous gas	5	3	1	..	1	..	3	2	1	..	..	..	..	..	..	..	..	..	2	1	..	..	1	..
182. Accidental drowning	36	4	9	8	5	10	9	..	1	1	2	5	..	..	..	..	..	..	27	4	8	7	3	5
183. Accidental injury by firearms (war casualties excepted)	2	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	1	..
184. Accidental injury by cutting or piercing instruments	3	..	..	..	2	1	1	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	1	1
185. Accidental injury by fall	4	2	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	3	1	2	..	..	..
187. Accidental injury by machinery	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..

TABLE No. 13.—Concluded.

Deaths Under 5 of Age, and Causes, 1921.

OFFICIAL ENGLISH TRANSLATION. (Diseases and Causes of Death).	Province.						Cities.						Towns.						Rural Municipalities					
	Total	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	2 Years.	3 Years.	4 Years.	Total.	Under 1 Yr.	1 Year.	1 Years.	3 Years.	4 Years
XIV.—External Causes. —Continued.																								
Other forms of crushing (vehicles, railways, landslides, etc)	22	....	4	1	7	10	12	....	2	..	5	5	1	....	....	....	....	1	9	....	2	1	2	4
188A. Railroad accidents	6	....	2	1	2	1	1	....	....	....	1	..	....	....	....	....	....	....	5	....	2	1	1	1
188B. Street car accidents	1	....	1	....	....	....	1	....	1	....	....	..	....	....	....	....	....	....	....	....	....	....	....	..
188C. Automobile accidents	13	....	1	....	4	8	9	....	1	..	3	5	1	....	....	....	....	1	3	....	....	....	1	2
188F. Other accidental injuries by crushing, etc	2	....	....	....	1	1	1	....	....	....	1	..	....	....	....	....	....	....	1	....	....	....	....	1
189. Injury by animals (poisoning excepted)	2	....	....	1	1	....	....	....	....	....	....	..	....	....	....	....	....	....	2	....	..	1	1	..
192B. Hunger or thirst	1	1	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	1	1	....	....	....	..
194. Excessive heat	16	14	2	....	....	....	6	4	2	....	....	..	2	2	....	....	....	....	8	8	....	....	....	..
195. Lightning	1	....	....	....	....	1	....	....	....	....	....	..	....	....	....	....	....	....	1	....	....	....	....	1
198. Homicide by cutting or piercing instruments	1	....	....	1	....	....	....	....	....	....	....	..	....	....	....	....	....	....	1	....	..	1	....	..
200. Infanticide (murder of infants less than 1 year of age)	1	1	....	....	....	....	1	1	....	....	....	..	....	....	....	....	....	....	....	....	....	....	....	..
201C. Fracture (cause not specified)	7	....	1	3	2	1	3	....	....	2	1	..	....	....	....	....	....	....	4	....	1	1	1	1
202. Other external violence	22	4	6	7	2	3	10	2	2	4	1	1	2	1	....	....	....	1	10	1	4	3	1	1
XV.—Ill-Defined Diseases.																								
Group Total	194	152	28	5	6	3	53	39	11	..	3	..	8	7	1	....	....	....	133	106	16	5	3	3
204. Sudden death	10	7	2	1	....	....	3	2	1	....	....	....	....	....	....	....	....	....	7	5	1	1	....	..
205A. Cause of death unstated or ill-defined	184	145	26	4	6	3	50	37	10	..	3	..	8	7	1	....	....	....	126	101	15	4	3	3

Deaths of Children from Specified Diseases in

Causes of Death.	Total	TOTAL UNDER 1 YEAR		Under 1 week		1 week and under 2 weeks		2 weeks and under 3 weeks		3 we & un 1 mo
		Male	Female	Male	Female	Male	Female	Male	Female	Male
Grand Total	6,763	3,918	2,845	1,380	1,006	253	171	162	134	162
1. Typhoid	1	1								
6. Smallpox	5	3	2		1					1
7. Measles	17	12	5			1				1
8. Scarlet fever	4	2	2							
9. Whooping cough	211	96	115	1	1	1		1	2	1
10. Diptheria	33	21	12	1		4		1		2
11. Influenza	67	36	31	1	1		1	2	2	2
(a) Influenza with pneumonic complications	20	8	12				1	1	1	1
(b) Influenza without pneumonic complications	47	28	19	1	1			1	1	1
13. Mumps	1	1								
15. Cholera nostras	7	6	1			1				
16. Dysentery	60	39	21					1		1
21. Erysipelas	29	12	17	1				1	2	3
25. Purulent infection and septicaemia	23	16	7	3		3	3	3		4
31. Tuberculosis of the lungs	12	6	6							
32. Tuberculosis of the meninges	29	17	12							
33. Tuberculosis of intestines and peritoneum	4	3	1							
35. Tuberculosis of the joints	1		1						1	
36. Tuberculosis of other organs	1	1								
37. Disseminated tuberculosis acute and chronic	7	4	3							
38. Syphilis	38	25	13		4	2	2	1		
50. Tumours	1		1		1					
51. Acute articular rheumatism	1		1							
56. Rickets	17	10	7							
57. Diabetes	2	2								
60B. Diseases of the thyroid gland	1		1		1					
62. Diseases of the thymus	3	3				1				
65. Leukaemia	2	2								
69. Other general diseases	49	32	17	7	3	3	3	3	2	1
70. Encephalitis	4	3	1		1					
71. Meningitis	70	40	30	2	3		1	3	1	3
(a) Simple meningitis	59	33	26	2	3		1	3	1	3
(b) Cerebrospinal meningitis	11	7	4							
73. Other diseases of the spinal cord	6	3	3							
74. Cerebral haemorrhage (apoplexy)	32	27	5	18	5	3		1		1
75. Paralysis unstated	3	1	2	1	2					
78. Epilepsy	4	2	2	1						
80. Convulsions of infants (under 5 years)	170	108	62	48	31	12	8	3	7	6
84. Other diseases of the nervous system	14	7	7	2	2					
86. Diseases of the ears and mastoid sinus	16	8	8		1				1	
87. Pericarditis	1	1		1						
88. Acute endocarditis and myocarditis	7	4	3	2						1
90. Organic diseases of the heart	13	8	5	2	2	1	1			1
95. Diseases of the lymphatic system (lymphangitis, etc.)	13	8	5	2	1	1				
96. Haemorrhage: other diseases of the circulatory system	11	6	5	2	3			1		
97. Diseases of the nasal fossae	2		2							
98. Diseases of the larynx	12	7	5							
99. Bronchitis	124	71	53	1	3	3	3	1	4	6
(a) Acute	29	14	15		1	1			2	1
(b) Chronic										
(c) Not defined under 5 years	95	57	38	1	2	2	3	1	2	5
100. Broncho-pneumonia (including capillary bronchitis)	369	215	154	8	7	5	8	10	5	6
101. Pneumonia	302	177	125	11	12	4	11	10	4	9
(a) Lobar pneumonia	41	22	19	2	2		2		3	
(b) Not otherwise defined	261	155	106	9	10	4	9	10	1	9
103. Pulmonary congestion, pulmonary apoplexy	13	9	4	2	1	1		1		1
107. Other diseases of the respiratory system (tuberculosis excepted)	3	1	2	1			1			
108. Diseases of the mouth and annexa	19	9	10						2	
109. Diseases of the pharynx	12	9	3	1	1					
110. Diseases of the oesophagus	1		1		1					
112. Other diseases of the stomach (cancer excepted)	33	24	9	2	1	2			1	1
113. Diarrhoea and enteritis	1,144	671	473	12	6	25	10	10	8	21
117. Appendicitis and typhlitis	1		1							
118. Hernia, intestinal obstruction	49	27	22	2	1	1	1	1	1	
(a) Hernia	9	7	2	1	1					
(b) Intestinal obstruction	40	20	20	1		1	1	1	1	

First Year of Life by Months for Ontario, 1921.

AGE AT DEATH

eks der ntn	1 month & under 2 months		2 months & under 3 months		3 months & under 4 months		4 months & under 5 months		5 months & under 6 months		6 months & under 7 months		7 months & under 8 months		8 months & under 9 months		9 months & under 10 m'ths		10 m'ths & under 11 m't..s		11 m'ths & under 12 m'ths	
Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male.	Female	Male	Female	Male	Female	Male	Female
108	323	227	280	197	270	154	214	165	158	136	160	134	147	98	120	93	105	81	93	63	91	78
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	..
...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
...	2	...	...	1	1	...	2	...	1	...	...	...	1	...	1	1	...	1	...	...	2	2
...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...
6	11	17	18	18	8	5	11	11	9	7	6	11	12	8	1	6	5	8	3	7	8	8
...	1	1	...	...	...	1	1	2	1	...	...	...	...	1	2	1	3	1	2	4	3	1
2	5	6	2	4	5	2	4	...	2	...	3	2	5	3	2	4	2	2	...	1	1	1
1	2	3	...	1	3	1	...	...	...	...	...	...	...	...	...	2	1	1	...	1	...	...
1	3	3	2	3	2	1	4	...	2	...	3	2	...	3	2	2	1	1	...	...	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	1	...	1	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
1	5	3	4	2	2	2	8	1	4	4	7	3	1	1	3	...	1	2	1	1	1	1
1	3	4	1	2	3	...	...	2	...	3	...	...	...	1	...	1	...	1	...	...	...	...
1	...	2	...	...	1	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
...	1	...	...	1	...	...	...	...	1	...	...	...	...	1	...	1	1	...	1	1	2	2
...	2	2	...	1	1	...	1	...	1	...	...	2	1	2	3	...	2	3	5	2	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	1
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...	12	2	5	3	1	...	...	1	1	...	1	...	...	1	1	...	...	...	...	...	1	...
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...	1	2	4	1	2	1	1	1	1	...	3	...	2	...	1	1	1	1	2	1	...	1
...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
...	6	2	3	3	4	5	4	1	...	2	3	1	3	4	1	2	3	2	4	...	1	3
...	5	2	2	3	4	4	4	1	...	2	1	...	3	3	...	2	3	2	3	...	...	2
...	1	...	1	...	...	1	...	...	...	...	2	1	...	1	1	...	...	...	1	...	1	1
...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...
...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...
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...	7	2	3	2	6	3	1	2	5	1	4	1	3	1	4	2	2	1	2	...	2	1
...	••	1	...	...	1	1	...	...	...	...	1	...	...	2	...	...	2	...	1	1	...	...
...	...	...	2	2	...	2	1	...	1	...	1	...	1	...	...	...	1	...	1	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...
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1	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	1	2	...	1	...	...	3	...	...	1	...	...	...	...	2	...	1	...	...	...	...	1
6	18	6	6	6	14	3	4	5	5	6	1	3	3	1	4	5	3	1	2	1	...	...
1	5	3	...	2	2	...	1	2	2	2	...	1	1	...	...	1	1	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	13	3	6	4	12	3	3	3	3	4	1	2	2	1	4	4	2	1	2	1	...	...
7	31	17	20	13	17	11	14	10	15	14	21	12	14	8	16	10	18	7	11	11	9	14
5	16	12	13	11	18	10	18	7	12	13	10	8	15	5	10	8	7	5	16	6	8	8
...	...	...	1	...	2	1	2	1	2	5	2	...	2	...	1	2	2	...	4	1	2	2
5	16	12	12	11	16	9	16	6	10	8	8	8	13	5	9	6	5	5	12	5	6	6
1	1	1	1	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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1	...	...	1	1	1	...	1	...	...	...	...	2	1	2	1	1	1	1	...	...	3	...
...	1	...	1	...	2	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	2	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	4	2	4	...	1	1	...	...	2	1	...	1	2	1	2	...	3	...	...	...	...	...
9	64	39	80	40	88	51	78	63	64	48	58	62	51	32	38	31	27	31	28	17	27	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	2	3	2	1	3	2	1	1	3	2	4	5	1	1	3	2	1	1	2	1	1	...
...	...	...	2	...	2	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	...
...	2	3	...	1	1	2	1	1	1	2	4	5	1	1	3	2	1	...	2	1	1	...

Deaths of Children from Specified Diseases in First

Causes of Death.	Total	TOTAL UNDER 1 YEAR		Under 1 week		1 week and under 2 weeks		2 weeks and under 3 weeks		3 we & un 1 mo
		Male	Female	Male	Female	Male	Female	Male	Female	Male
119. Other diseases of the intestines	11	3	8	.....	3	....	1	....	1	....
124. Other diseases of the liver	5	5	.....	.....	.....	1	....	2	.....	....
126. Simple peritonitis	11	6	5	1	.....	1	....	....	.....	....
127. Other diseases of the digestive system	1	.....	1	.....	.....	....	....	....	.....	....
128. Acute nephritis	27	18	9	4	1	4	....	....	....	1
131. Other diseases of the kidneys and annexa	8	5	3	.....	1	....	....	....	.....	....
153. Acute abscess	12	6	6	.....	.....	....	....	1	.....	....
155. Other diseases of the skin and annexa	13	8	5	.....	.....	2	....	1	1	....
156. Other diseases of the bones (tuberculosis excepted)	2	2	.....	.....	.....	....	....	1	.....	....
157. Diseases of the joints (tuberculosis and rheumatism excepted)	2	1	1	.....	.....	....	....	....	.....	....
159. Congenital malformations (still-births not included)	470	264	206	140	110	22	26	16	10	11
(b) Hydrocephalus	35	17	18	6	10	....	1	....	1	....
(c) Congenital malformations of the heart	187	112	75	71	47	7	9	5	4	2
(a) Other congenital malformations	248	135	113	63	53	15	16	11	5	9
160. Congenital debility, icterus and scleroma	1,029	613	416	204	146	52	26	36	24	45
161. Premature birth and injuries at birth	1,630	938	692	758	528	72	57	39	41	26
162. Other diseases peculiar to early infancy	244	131	113	96	85	14	5	9	11	5
163. Lack of care	5	4	1	4	1	....	....	....	....	....
175. Poisoning by food	3	2	1	.....	.....	....	....	....	....	....
177. Other acute poisonings	2	1	1	.....	.....	....	....	....	1	....
178. Conflagration	4	1	3	.....	.....	....	....	....	....	....
179. Burns (conflagration excepted)	10	6	4	.....	.....	....	....	....	....	....
180. Accidental mechanical suffocation	20	10	10	.....	.....	....	1	1	....	....
181. Absorption of deleterious gases (conflagration excepted)	3	2	1	.....	.....	....	....	....	....	....
182. Accidental drowning	4	2	2	.....	.....	....	....	....	....	....
185 Accidental injury by fall	2	1	1	.....	.....	....	....	....	....	....
200 Infanticide	1	1	.....	.....	.....	....	....	....	....	1
202 Other external violence	4	3	1	.....	.....	....	....	....	....	....
204. Sudden death	7	5	2	1	.....	2	....	....	....	....
205. Cause of death unstated or ill-defined	159	86	73	37	35	9	2	2	2	1

Year of Life by Months for Ontario, 1921.—*Concluded.*

AGE AT DEATH

eks der nth	1 month & under 2 months		2 months & under 3 months		3 months & under 4 months		4 months & under 5 months		5 months & under 6 months		6 months & under 7 months		7 months & under 8 months		8 months & under 9 months		9 months & under 10 m'ths		10 m'ths & under 11 m'ths		11 m'ths & under 12 m'ths	
Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1							1			1									1	1	1	
	1						1															
		2				1		1	1		1		1	1			1					
																		1				
		1	2	1		1	4	2			1		1	1						2	1	
							1	1	1		1				2			1				
1	1	2	1	2	2			1					1									
	2	2		1	1		1								1							1
													1									
		1			1																	
10	13	18	19	7	9	8	11	3	3	4	7	3	3	3	4	2	3	1	1		2	1
	1		3	1		2	2	1			2	1			1	1					2	
2	7	6	7	1	3	1	4			1	2	2	1	1	2	1	1					
8	5	12	9	5	6	5	5	2	3	3	3		2	2	1		2	1	1			1
15	62	43	61	49	53	31	31	30	18	17	15	8	12	12	9	7	6	3	5	4	4	1
26	25	18	4	8	8	2	3	8		1		2	1		1		1	1				
7	5	3	1	2	1																	
	1	1			1																	
					1																	
						1				1					1			1				
1	1							2		1							2				3	
1	3	3	3	4	3	1																
1					1												1					
								1	1						1							1
														1							1	
			1						1		1					1						
			1				1	2														
1	8	5	8	4	5	4	4	5		2	3	4	4	4	1	2	3	2			1	1

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																	
		Total.	Under 1 year	1 year.	2 years.	3 years.	4 years.	Total Under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
DEATHS—ALL CAUSES.																			
Total		34551	6763	827	390	291	282	8553	928	529	700	858	1020	2103	2301	3151	4539	5533	3591
	M	18062	3918	442	231	145	138	4874	511	258	391	431	507	1018	1157	1668	2367	2827	1729
	F	16489	2845	385	159	146	144	3679	417	271	309	427	513	1085	1144	1483	2172	2706	1862
CLASS I–GENERAL DISEASES																			
**Total		8791	625	221	175	136	121	1278	462	225	283	402	452	812	911	1133	1365	1058	375
	M	4196	347	112	107	62	60	688	224	94	141	180	210	373	401	512	647	529	180
	F	4595	278	109	68	74	61	590	238	131	142	222	242	439	510	621	718	529	195
1. Enteric fever*	M	139				1	1	2	3	5	11	18	21	27	23	16	11	2	
*	F	74	1	1		4		6	2	3	10	9	8	10	6	8	6	5	1
1A. Typhoid fever	M	136				1	1	2	3	5	10	18	21	27	22	16	11	1	
	F	73	1	1		4		6	2	3	10	9	8	10	6	8	6	4	1
1B. Paratyphoid fever	M	3									1				1			1	
	F	1																1	
3. Relapsing fever (spirillum obermeiri)	M	1				1		1											
5. Malaria	M	1															1		
	F	1														1			
6. Smallpox	M	14	3			1	1	5		2	1				1	1	1	2	1
	F	10	2					2		1	1		3	1	2				
7. Measles	M	28	12	11		2		25	2						1				
	F	26	5	2	2		3	12	4	1	4	1		2	1			1	
8. Scarlet fever	M	67	2	6	10	7	5	30	26	3	4			2	1	1			
	F	77	2	1	7	13	10	33	21	6	1	4	7	5					
9. Whooping cough	M	139	96	19	10	6	2	133	5					1					
	F	171	115	35	11	3	3	167	4										
10. Diphtheria	M	323	21	23	40	26	37	147	120	37	7	4	3	3	1				
	F	330	12	23	29	38	26	128	130	46	3	6	4	7	4	2			
11. Influenza*	M	243	36	10	6	2	1	55	11	2	10	11	11	24	23	19	19	35	21
*	F	266	31	9	4	3	3	50	10	7	4	12	13	20	23	22	33	39	31
11A. Influenza, with pulmonary complications specified	M	90	8	6	2			16	2		3	5	7	16	10	7	8	12	3
	F	97	12	5	3	1	2	23	3		2	4	6	8	9	6	17	13	6
11B. Influenza, without pulmonary complications specified	M	153	28	4	4	2	1	39	9	2	7	6	4	8	13	12	11	23	18
	F	169	19	4	1	2	1	27	7	7	2	8	7	12	14	16	16	26	25
13. Mumps	M	2			1			1	1										
	F	2	1					1							1				
15. Cholera nostras (choleriform enteritis)	M	10	6	1				7	1								1		1
	F	14	1	3	1			5	3								2	2	2
16. Dysentery	M	87	39	6	4	3	1	53	4					1	1	2	5	10	11
	F	71	21	7	1	2	1	32	1	3				1	2	3	6	11	11
16C. Dysentery, unspecified or due to other causes	M	87	39	6	4	3	1	53	4					1	1	2	5	10	11
	F	71	21	7	1	2	1	32	1	3				1	2	3	6	11	11
21. Erysipelas	M	40	12	1				13	1			1		4	4	3	4	6	3
	F	51	17	2	1			20		1		1	1	2	8	4	3	7	4
23. Encephalitis lethargica	M	27			1			1	2		2	4	3	5	6	2	2		
	F	21		2	1		1	4	1	3				2	5	1	3	2	
24. Meningococcus meningitis	M	1												1					
27. Anthrax	M	3								1						2			
29. Tetanus	M	14	1		1	3		5	1		3		1		1	2	1		
	F	10			1			1	1		1	2		4					1
30. Mycoses	M	2										1			1				
	F	1															1		
31-37. Tuberculosis, Total.*	M	1030	31	21	21	7	4	84	15	19	68	115	143	211	131	115	83	40	4
	F	1053	23	15	7	8	5	58	24	28	94	155	165	217	128	77	62	40	3
31. Tuberculosis of the respiratory system	M	856	6	3	7	4	1	21	8	12	58	105	126	189	121	103	74	33	4
	F	875	6	2	5	4	3	20	11	15	80	135	147	195	109	71	53	36	1

* Including Class II.

AGES AND MONTHS IN ONTARIO, 1921.

90 to 99 years.	100 years and over.	Not stated.	NATIVITY: Canada	British.	Foreign.	Not stated.	SOCIAL CONDITION: Single.	Married.	Widowed.	Divorced.	Not stated	MONTHS: January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
656	34	55	25606	6205	1910	830	15103	12802	6544	2	100	3178	3089	3298	3005	2861	2378	2704	2838	2905	2811	2651	2833
271	16	37	13287	3200	1082	493	8581	7070	2335	1	75	1690	1632	1667	1530	1488	1227	1432	1504	1511	1469	1398	1514
385	18	18	12319	3005	828	337	6522	5732	4209	1	25	1488	1457	1631	1475	1373	1151	1272	1334	1394	1342	1253	1319
28	1	6	6626	1429	536	200	3730	3860	1181	..	20	746	805	852	776	712	634	651	735	736	741	709	694
12	1	4	3079	694	303	120	1932	1860	389	..	15	367	409	395	352	325	295	302	359	345	343	343	361
16	..	2	3547	735	233	80	1798	2000	792	..	5	379	396	457	424	387	339	349	376	391	398	366	333
..	..	..	103	15	15	6	68	59	11	..	1	9	5	8	6	9	8	9	26	14	26	14	5
..	..	..	63	9	2	..	37	32	5	..	..	5	1	3	4	2	5	6	15	16	9	4	4
..	..	..	101	14	15	6	67	59	9	..	1	8	5	7	6	9	8	9	26	14	25	14	5
..	..	..	62	9	2	..	37	31	5	..	..	5	1	3	4	2	5	6	15	15	9	4	4
..	..	..	2	1	..	..	1	..	2	..	..	1	..	1	..	..	..	..	..	..	1	..	..
..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
..	..	..	12	1	..	1	9	3	2	..	..	1	3	2	2	3	1	1	..	..	..	..	1
..	..	..	9	..	1	..	4	6	..	..	..	3	4	3	..	..	..	..	..	..	..	..	..
..	..	..	26	1	..	1	27	1	..	..	..	9	6	2	2	1	2	1	..	1	..	2	2
..	..	..	24	1	1	..	22	4	..	..	..	4	6	3	..	2	2	2	1	1	3	1	1
..	..	..	61	4	1	1	63	4	..	..	..	6	7	11	2	4	4	1	3	4	5	10	10
..	..	..	69	5	1	2	63	14	..	..	..	13	7	8	8	5	2	3	2	8	4	13	4
..	..	..	134	1	1	3	138	1	..	..	..	15	19	19	18	11	12	7	14	8	3	6	7
..	..	..	165	3	1	2	171	..	..	..	..	17	17	32	17	19	9	12	17	13	9	5	4
..	..	1	296	16	8	3	316	7	..	..	..	39	30	33	19	10	14	7	23	33	50	37	28
..	..	..	311	7	7	5	312	18	..	..	..	36	35	34	23	19	19	13	22	17	39	35	38
2	..	..	187	34	16	6	112	107	24	..	..	17	43	43	49	14	7	6	7	11	15	14	17
2	..	..	220	37	4	5	109	99	58	..	..	23	42	57	37	22	14	9	8	5	13	20	16
1	..	..	68	14	5	3	37	44	9	..	..	4	19	20	27	7	..	..	2	2	2	4	3
..	..	..	83	11	..	3	39	38	20	..	..	3	20	22	15	8	4	2	2	..	5	9	7
1	..	..	119	20	11	3	75	63	15	..	..	13	24	23	22	7	7	6	5	9	13	10	14
2	..	..	137	26	4	2	70	61	38	..	..	20	22	35	22	14	10	7	6	5	8	11	9
..	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..
..	..	..	9	1	..	..	8	1	1	..	..	..	1	..	..	..	..	2	..	4	3	..	..
..	..	..	13	..	1	..	9	2	3	..	..	..	..	..	1	..	..	1	2	8	2	..	..
..	..	..	71	10	4	2	63	13	11	..	..	1	..	1	1	..	1	8	19	30	14	6	6
1	..	..	57	9	3	2	39	18	14	..	..	..	1	..	..	..	..	4	22	21	17	5	1
..	..	..	71	10	4	2	63	13	11	..	..	1	..	1	1	..	1	8	19	30	14	6	6
1	..	..	57	9	3	2	39	18	14	..	..	..	1	..	..	..	..	4	22	21	17	5	1
1	..	..	30	8	2	..	21	17	2	..	..	7	5	2	5	3	5	3	2	1	1	3	3
..	..	..	36	14	1	..	26	16	9	..	..	5	3	7	6	4	5	4	5	1	2	3	6
..	..	..	20	3	3	..	12	15	..	..	..	4	5	4	..	4	..	1	1	3	2	1	2
..	..	..	16	2	3	..	9	9	3	..	..	..	2	3	3	1	3	3	..	2	2	2	..
..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
..	..	..	3	..	..	..	1	1	1	..	..	..	..	..	..	1	..	..	..	..	..	2	..
..	..	..	14	..	..	..	11	3	..	..	..	1	2	1	..	1	1	1	2	2	3	..	..
..	..	..	9	..	1	..	4	5	1	..	..	2	..	3	..	..	1	2	..	1	..	1	..
..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
..	..	2	692	167	126	45	551	426	48	..	5	89	120	110	77	103	71	80	96	61	66	68	89
1	..	1	837	121	79	16	494	487	72	..	..	82	78	96	103	112	83	95	104	80	76	68	76
..	..	2	562	147	109	38	426	384	41	..	5	74	99	86	64	88	61	71	76	49	54	60	74
1	..	1	692	104	65	14	377	435	63	..	..	71	63	80	86	91	69	79	92	64	66	53	61

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																	
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total Under 5 years.	5 to 9 years.	10 to 14 years	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
32. Tuberculosis of the meninges and central nervous system	M	67	17	13	8	2	3	43	5	2	5	2	1	4	1	3	1	....	....
	F	52	12	8	....	3	2	25	8	4	9	5	1	2	2	....	1	....	....
33. Tuberculosis of the intestines and peritoneum	M	31	3	1	2	....	....	6	1	2	1	3	3	5	6	2	....	2	....
	F	54	1	3	1	1	....	6	2	1	6	7	7	10	7	2	4	2	....
34. Tuberculosis of the vertebral column	M	12	....	....	1	1	....	2	....	....	....	2	5	2	....	....	....	1	....
	F	16	....	....	1	....	....	1	....	1	....	4	2	2	3	1	....	1	1
35. Tuberculosis of the joints	M	6	....	....	....	....	....	....	1	....	....	....	2	....	....	2	1	....	....
	F	8	1	....	....	....	....	1	1	2	....	1	1	1	....	....	1	....	....
36. Tuberculosis of other organs (B-E inclusive)	M	26	1	1	1	....	....	3	....	1	1	1	1	7	2	1	5	4	....
	F	22	....	1	....	....	....	1	....	....	2	1	6	1	4	3	2	1	1
36B. Tuberculosis of the bones (vertebral column excepted)	M	4	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	1	....
	F	3	....	....	....	....	....	....	....	....	....	....	2	....	....	....	1	....	....
36C. Tuberculosis, lymphatic system (mesenteric, and retro peritoneal glands excepted)	M	5	1	1	1	....	....	3	....	....	....	....	....	1	....	....	1	....	....
	F	2	....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
36D. Tuberculosis, genito-urinary system	M	11	....	....	....	....	....	....	....	1	1	....	1	4	2	....	2	....	....
	F	10	....	....	....	....	....	....	....	....	....	1	2	1	3	2	....	1	....
36E. Tuberculosis of organs other than above	M	6	....	....	....	....	....	....	....	....	....	1	....	1	....	1	....	3	....
	F	7	....	....	....	....	....	....	....	....	1	....	2	....	1	1	1	....	1
37. Disseminated tuberculosis	M	32	4	3	2	....	....	9	....	2	3	2	5	4	1	4	2	....	....
	F	26	3	1	....	....	....	4	1	5	3	2	1	6	3	....	1	....	....
37A. Disseminated tuberculosis, acute	M	28	4	3	2	....	....	9	....	2	2	2	4	4	1	3	1	....	....
	F	25	3	1	....	....	....	4	1	5	3	2	1	5	3	....	1	....	....
37B. Disseminated tuberculosis, chronic	M	4	....	....	....	....	....	....	....	....	1	....	1	....	....	1	1	....	....
	F	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
38. Syphilis	M	66	25	....	2	....	....	27	....	....	2	....	....	5	15	9	8	....	....
	F	31	13	2	....	....	....	15	....	1	1	2	....	5	3	1	3	....	....
40. Connococcal infection (ophthalmia excepted)	M	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
	F	5	....	....	....	....	....	....	....	....	....	....	....	1	....	1	3	....	....
41. Purulent infection, septicaemia	M	100	18	2	1	....	1	22	7	1	2	2	5	14	11	13	12	9	2
	F	80	8	2	....	....	1	11	5	1	3	9	9	17	5	7	7	3	3
42. Other infectious diseases	M	3	2	....	1	....	....	3	....	....	....	....	....	....	....	....	....	....	....
	F	6	6	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....
43-50 Cancer total	M	1176	....	1	1	2	1	5	2	4	1	5	5	28	103	212	358	327	116
	F	1409	....	....	....	....	2	2	4	3	2	3	11	66	220	317	402	267	101
43. Cancer of the bucca cavity	M	87	....	....	....	....	....	....	....	....	....	....	....	1	5	10	29	25	16
	F	11	....	....	....	....	....	....	....	....	....	....	....	1	1	1	5	3	....
44. Cancer of the stomach and liver	M	483	....	....	....	....	....	....	....	....	....	....	3	9	46	108	144	135	36
	F	377	....	....	....	....	....	....	....	....	....	1	3	7	36	62	134	97	35
45. Cancer of the peritoneum, intestines and rectum	M	178	....	....	....	1	....	1	....	1	1	1	....	5	20	28	56	48	16
	F	213	....	....	....	....	....	....	....	....	....	....	3	10	24	50	60	55	9
46. Cancer of the female genital organs	F	236	....	....	....	....	....	....	1	1	....	....	2	25	48	54	76	20	9
47. Cancer of the breast	F	235	....	....	....	....	....	....	....	....	....	....	1	10	59	65	48	36	12
48. Cancer of the skin	M	41	....	....	....	....	....	....	....	....	....	....	....	....	1	4	11	15	6
	F	25	....	....	....	....	....	....	....	....	....	....	....	....	1	4	4	3	12

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	54	7	4	2	60	6	1	...	...	8	5	9	1	7	7	6	8	4	4	6	2
...	...	...	45	2	4	1	44	7	1	...	...	4	4	5	6	7	2	5	3	6	3	3	4
...	...	...	20	4	6	1	20	8	3	...	...	2	4	4	6	2	1	....	2	4	1	....	5
...	...	...	43	4	6	1	30	21	3	...	...	3	1	4	4	6	4	8	6	3	4	5	6
...	...	...	8	2	1	1	6	5	1	...	...	....	3	1	....	1	1	1	3	....	2	.....	....
...	...	...	13	2	1	...	9	7	...	...	...	1	3	1	....	2	4	....	1	2	1	....	1
...	...	...	5	1	....	...	4	2	....	...	...	....	....	2	.....	.....	.....	.....	1	....	1	1	1
...	...	...	7	1	....	...	6	1	1	...	...	....	1	....	1	1	....	1	1	1	....	1	1
...	...	...	20	3	3	...	14	10	2	...	...	3	2	3	3	4	1	....	3	2	2	....	3
...	...	...	14	7	1	...	9	10	3	...	...	1	2	2	4	2	3	1	....	3	....	3	1
...	...	...	4	....	....	...	2	2	....	...	...	....	1	1	....	.....	.....	.....	.....	2	.....	.....	.....
...	...	...	1	2	....	...	1	1	1	...	...	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
...	...	...	4	....	1	...	4	.....	1	...	...	2	....	2	.....	.....	.....	.....	1	.....	.....	.....	....
...	...	...	1	....	1	...	2	.....	.....	...	...	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
...	...	...	8	1	2	...	7	3	1	...	...	.....	.....	.....	1	3	1	....	2	....	1	....	3
...	...	...	7	3	....	...	3	6	1	...	...	1	2	2	.....	.....	.....	1	....	1	....	2	1
...	...	...	4	2	....	...	1	5	....	...	...	1	1	....	2	1	.....	.....	.....	.....	1	.....	.....
...	...	...	5	2	....	...	3	3	1	...	...	.....	.....	.....	1	2	1	.....	.....	2	....	1	....
...	...	...	23	3	3	3	21	11	....	...	...	2	7	5	3	1	....	2	3	2	2	1	4
...	...	...	23	1	2	...	19	6	1	...	...	2	4	4	2	3	1	1	1	1	2	3	2
...	...	...	20	3	2	3	19	9	....	...	...	2	6	5	2	1	....	2	3	2	2	1	2
...	...	...	22	1	2	...	19	5	1	...	...	1	4	4	2	3	1	1	1	1	2	3	2
...	...	...	3	....	1	...	2	2	.....	..	...	....	1	....	1	....	.....	.....	.....	.....	.....	.....	2
...	...	...	1	.....	.....	...	.....	1	.....	...	...	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
...	...	...	42	14	7	3	43	19	4	...	...	3	5	4	4	6	7	5	2	6	11	7	6
...	...	...	23	6	1	1	17	10	4	...	...	....	3	1	2	3	3	2	3	5	3	3	3
...	...	...	1	1	....	...	1	1	....	...	...	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	....
...	...	...	3	1	1	...	.....	4	1	...	...	1	2	.....	.....	.....	1	....	1	.....	.....	.....	.....
...	...	...	78	15	7	...	48	48	4	...	...	16	16	7	5	5	6	9	6	6	9	7	8
...	...	...	54	14	9	3	27	47	6	...	...	8	5	5	8	5	10	7	8	10	4	6	4
...	...	...	3	....	....	...	3	.....	.....	...	...	.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....
...	...	...	6	....	....	...	6	.....	.....	...	...	....	1	1	1	1	....	2	.....	.....	.....	.....	.....
8	1	1	765	296	84	31	178	784	210	...	4	104	95	83	90	90	105	116	100	92	88	109	104
11	...	...	952	351	74	32	210	765	433	...	1	106	118	116	120	120	113	107	109	132	139	118	111
1	...	...	67	10	6	4	16	52	19	...	...	7	8	7	7	8	9	7	4	7	6	7	10
...	...	...	9	1	....	1	2	6	3	...	...	1	....	2	....	2	.....	.....	1	1	3	....	1
2	...	...	298	140	35	10	61	334	86	...	2	37	39	39	40	41	37	53	40	40	31	52	34
2	...	...	250	90	27	10	42	191	144	...	...	27	30	26	36	33	26	31	25	31	47	39	26
1	...	...	125	39	11	3	24	132	21	...	1	11	18	11	14	15	19	18	20	10	12	16	14
2	...	...	145	52	10	6	24	123	66	...	...	9	16	22	20	17	22	17	27	15	14	16	18
...	...	...	150	66	14	6	38	143	55	...	...	21	22	22	14	20	23	19	12	20	21	17	25
4	...	...	165	55	11	4	36	125	73	...	1	18	23	22	21	20	15	13	13	26	23	20	21
3	1	...	31	9	1	...	7	22	12	...	...	4	2	....	4	3	6	7	2	5	2	3	3
1	...	...	19	5	1	...	1	8	16	...	...	2	1	....	1	3	2	4	1	2	6	1	2

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
49. Cancer of the unspecified organs	M	387	....	1	1	1	1	4	2	3	...	4	2	13	31	62	118	104	42
	F	312	....	....	....	....	2	2	3	2	2	2	2	13	51	81	75	53	24
50. Benign tumors and tumors not returned as malignant (tumors of female genital organs excepted)	M	8	....	....	....	....	....	....	....	....	....	....	2	....	....	1	1	3	....
	F	28	1	....	....	....	....	1	1	....	....	....	1	1	4	4	5	8	3
51. Acute rheumatic fever	M	68	....	....	....	....	3	3	7	11	11	6	1	5	7	4	8	4	1
	F	77	1	....	....	....	....	1	10	12	6	3	3	5	6	9	10	7	5
52. Chronic rheumatism, osteo-arthritis, gout	M	59	....	....	....	....	....	....	1	3	1	3	1	2	5	7	10	18	8
	F	83	....	....	....	....	....	....	1	3	....	....	3	9	2	16	14	27	8
53. Scurvy	M	2	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
	F	4	2	1	....	1	....	4	....	....	....	....	....	....	....	....	....	....	....
54. Pellagra	M	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
	F	3	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....
56. Rickets	M	14	10	4	....	....	....	14	....	....	....	....	....	....	....	....	....	....	....
	F	9	7	1	....	....	....	8	1	....	....	....	....	....	....	....	....	....	....
57. Diabetes mellitus	M	154	2	1	2	....	....	5	6	6	9	5	9	13	15	29	32	23	2
	F	180	....	....	1	....	3	4	7	6	4	3	1	10	21	41	52	23	7
58, Anaemia, chlorosis	M	224	6	2	1	....	....	9	2	....	2	2	2	12	26	50	68	44	7
	F	287	....	1	....	....	....	1	3	....	3	5	5	20	35	64	75	64	11
58A. Pernicious anaemia	M	186	1	1	....	....	....	2	....	....	2	....	1	10	26	42	61	37	5
	F	219	....	1	....	....	....	1	1	....	1	2	2	14	30	51	63	49	5
58B. Other anaemias and chlorosis	M	38	5	1	1	....	....	7	2	....	....	2	1	2	....	8	7	7	2
	F	68	....	....	....	....	....	....	2	....	2	3	3	6	5	13	12	15	6
59. Diseases of the pituitary gland	F	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
60. Diseases of the thyroid gland	M	18	....	....	....	....	....	....	1	....	1	....	....	4	1	2	7	1	1
	F	133	1	....	....	....	....	1	....	1	2	3	7	20	26	36	19	17	1
60A. Exophthalmic goitre	M	5	....	....	....	....	....	....	....	....	....	....	....	1	1	1	2	....	....
	F	72	....	....	....	....	....	....	....	....	1	2	5	13	18	19	9	4	1
60B. Other diseases of the thyroid gland	M	13	....	....	....	....	....	....	1	....	1	....	....	3	....	1	5	1	1
	F	61	1	....	....	....	....	1	....	1	1	1	2	7	8	17	10	13	....
62. Diseases of the thymus	M	3	3	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....
63. Diseases of the adrenals (Addison's disease)	M	7	....	....	....	....	....	....	....	....	....	1	....	....	3	2	....	1	....
	F	13	....	....	....	....	....	....	....	....	1	....	....	3	5	2	1	1	....
64. Diseases of the spleen	M	8	....	....	....	....	....	....	2	....	....	1	....	1	1	....	1	2	....
	F	5	....	....	1	1	....	2	2	....	....	....	....	1	....	....	....	....	....
65. Leukaemia, lymphadenoma	M	30	2	2	1	1	1	7	2	....	4	....	1	5	1	3	6	1	....
	F	28	....	1	....	1	1	3	....	2	....	....	1	6	3	2	7	3	1
65A. Leukaemia	M	21	2	2	1	1	1	7	2	....	1	....	1	2	1	3	4	....	....
	F	24	....	1	....	1	1	3	....	2	....	....	1	4	3	2	7	2	....
65B. Lymphadenoma (Hodgkin's disease)	M	9	....	....	....	....	....	....	....	....	3	....	....	3	....	....	2	1	....
	F	4	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	1	1
66. Alcoholism (acute and chronic)	M	39	....	....	....	....	....	....	....	....	1	....	2	2	16	13	4	1	....
	F	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
67. Chronic poisoning by mineral substances	M	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
	F	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
67A. Chronic lead poisoning	F	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
67B. Others under this title	M	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
69. Other general diseases	M	41	18	2	4	...	2	26	2	...	1	1	....	3	3	1	3	....	1
	F	33	8	1	....	....	2	11	3	3	2	3	....	2	....	2	3	2	2
III.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																			
**Total	M	1648	200	34	15	10	7	266	39	20	30	20	35	67	131	186	294	351	188
**Total	F	1620	120	29	12	6	12	179	34	15	18	13	27	67	125	175	300	397	237
70. Encephalitis	M	40	3	...	1	1	...	5	1	2	1	2	2	6	9	6	3	3	....
	F	25	1	1	....	....	3	5	1	....	1	....	3	3	4	3	3	1	1

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	1	244	98	31	14	70	244	72	...	1	45	28	26	25	23	34	31	34	30	37	31	43
2	..	..	214	82	11	5	67	169	76	...	...	28	26	22	28	25	25	23	30	37	25	25	18
1	..	..	3	5	....	....	2	4	2	...	...	....	....	1	1	....	1	....	2	....	....	2	1
...	..	..	22	5	1	...	3	19	6	...	...	2	2	6	3	2	2	....	4	....	1	4	2
...	..	..	55	10	3	...	43	22	3	...	...	6	5	9	9	7	4	4	3	7	4	4	6
...	..	..	58	15	3	1	37	29	11	...	...	8	9	7	5	12	11	4	4	6	4	6	1
...	..	..	41	14	3	1	11	36	11	...	1	2	5	4	8	6	7	5	3	3	5	4	7
...	..	..	65	15	1	2	23	37	23	...	...	5	8	7	10	4	9	11	5	3	3	9	9
...	..	..	2	....	....	....	2	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....
...	..	..	4	....	....	....	4	....	....	....	....	....	....	1	....	....	....	1	1	1	....	....	....
...	..	..	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
...	..	..	1	1	....	1	1	1	1	....	....	....	....	....	....	....	....	2	....	....	....	....	1
...	..	..	13	....	....	1	14	....	....	....	....	1	....	1	2	1	....	2	3	1	1	....	2
...	..	..	9	....	....	....	9	....	....	....	....	....	3	1	....	....	....	2	1	2	....	....	....
...	..	..	122	21	10	1	51	89	13	...	1	13	8	15	12	15	8	7	12	12	16	16	20
...	..	1	132	31	13	4	36	98	44	...	2	25	15	16	21	4	7	13	11	20	16	20	12
...	..	..	176	35	8	5	50	141	31	...	2	13	17	20	24	21	16	17	19	29	8	22	18
1	..	..	217	54	13	3	52	164	70	...	1	18	17	24	26	31	27	26	18	23	28	26	23
...	..	..	148	28	7	3	33	123	28	...	2	11	16	16	17	18	13	14	16	23	7	20	15
...	..	..	165	40	11	3	36	129	54	...	...	11	15	17	17	24	21	21	14	16	23	23	17
			28	7	1	2	17	18	3	...		2	1	4	7	3	3	3	3	6	1	2	3
1	..	..	52	14	2	...	16	35	16	...	1	7	2	7	9	7	6	5	4	7	5	3	6
...	..	..	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
...	..	..	13	2	....	3	4	11	3	...	...	1	2	....	2	....	1	2	2	4	2	1	1
...	..	..	108	17	7	1	32	80	21	...	...	9	10	18	17	12	8	9	10	7	13	10	10
...	..	..	2	2	....	1	....	4	1	...	...	....	1	....	1	....	....	....	1	1	1	....	....
...	..	..	57	9	5	1	20	46	6	...	...	4	6	12	11	7	3	5	6	3	3	4	8
...	..	..	11	....	....	2	4	7	2	...	...	1	1	....	1	....	1	2	1	3	1	1	1
...	..	..	51	8	2	...	12	34	15	...	...	5	4	6	6	5	5	4	4	4	10	6	2
...	..	..	3	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....
...	..	..	7	....	....	....	2	4	1	...	...	....	....	2	....	....	....	2	2	....	....	1	....
...	..	..	8	5	....	...	4	8	1	...	...	1	2	2	2	....	....	1	....	....	2	1	2
...	..	..	5	2	1	...	5	2	1	...	...	1	....	....	....	2	1	....	....	....	1	1	2
...	..	..	4	....	1	...	4	1	....	....	....	1	....	....	2	....	1	....	....	....	1	....	....
...	..	..	20	9	1	...	16	12	2	...	...	2	2	1	4	....	3	....	2	3	3	3	7
...	..	..	19	6	3	...	7	15	5	...	1	2	1	2	1	2	2	5	2	3	4	2	2
...	..	..	16	4	1	...	12	8	1	...	...	2	2	...	4	...	1	...	1	2	1	3	5
...	..	..	16	6	2	...	6	13	4	...	1	1	1	2	1	2	2	3	2	3	3	2	2
...	..	..	4	5	....	....	4	4	1	...	...	....	....	1	....	....	2	....	1	1	2	....	2
...	..	..	3	....	1	...	1	2	1	...	...	1	....	....	....	....	....	2	....	....	1	....	....
...	..	..	29	5	2	3	19	17	3	...	...	4	3	4	7	5	3	1	2	2	2	1	5
...	..	..	1	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
...	..	..	....	1	....	1	....	2	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....
...	..	..	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
...	..	..	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
...	..	..	....	1	....	1	....	2	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....
...	..	..	36	2	1	2	32	8	1	...	...	2	5	7	1	3	4	4	5	5	1	2	2
...	..	..	28	4	1	...	24	8	1	...	...	2	4	....	3	4	2	2	1	5	3	4	3
19	..	2	1192	331	90	35	615	768	259	...	6	138	118	142	135	179	113	132	142	125	141	120	163
31	..	2	1145	337	92	46	471	606	538	1	4	125	123	155	130	151	136	136	136	126	139	102	161
...	..	..	31	7	2	...	16	21	2	...	1	4	2	6	1	3	6	1	5	2	3	4	3
...	..	..	21	2	2	...	9	14	2	...	...	2	....	3	....	2	3	1	6	4	2	1	1

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 and 79 years.	80 to 89 years.
71. Meningitis	M	138	40	13	4	6	4	67	17	5	9	4	10	4	8	6	4	4	....
*	F	99	30	13	5	4	5	57	7	5	4	1	4	7	5	4	3	....	2
71A. Simple meningitis	M	110	33	9	3	3	4	52	15	3	7	2	7	3	8	6	3	4	....
	F	77	26	9	5	3	4	47	4	2	3	1	2	6	5	2	3	....	2
71B. Non-epidemic cerebrospinal meningitis	M	28	7	4	1	3	..	15	2	2	2	2	3	1	....	....	1	....	....
	F	22	4	4	...	1	1	10	3	3	1	..	2	1	....	2	....	....	....
72. Tabes dorsalis (locomotor ataxia)	M	19	....	....	....	....	....	....	....	....	....	....	....	....	3	4	7	4	1
	F	10	....	....	....	....	....	....	....	....	....	....	....	....	2	4	....	4	....
73. Other diseases of the spinal cord	M	116	3	2	2	...	1	8	2	4	3	4	1	6	7	16	34	22	8
	F	113	3	3	3	...	2	11	5	4	2	1	1	2	10	11	38	23	5
74. Cerebral haemorrhage, apoplexy	M	762	27	2	2	....	....	31	2	..	1	1	5	8	45	94	182	246	130
*	F	791	5	....	....	....	....	5	....	....	....	2	3	13	40	92	163	265	183
74A. Cerebral haemorrhage	M	736	27	2	1	....	....	30	2	..	1	1	2	8	44	90	174	240	127
	F	760	5	....	....	....	....	5	....	....	....	2	2	11	36	88	155	260	177
74B. Cerebral thrombosis and embolism	M	26	....	..	1	....	....	1	....	....	....	....	3	....	1	4	8	6	3
	F	31	....	....	....	....	....	....	....	....	....	....	1	2	4	4	8	5	6
75. Paralysis of unstated origin	M	167	1	1	....	....	....	2	....	....	....	1	3	7	20	24	32	47	30
*	F	180	2	....	....	1	....	3	....	....	....	....	1	5	8	17	49	60	32
75A. Hemiplegia	M	62	....	....	....	....	....	....	....	....	....	....	1	1	6	8	15	21	10
	F	86	1	....	....	1	....	2	....	....	....	....	....	2	3	7	25	32	12
75B. Others under this title	M	105	1	1	....	....	....	2	....	....	....	1	2	6	14	16	17	26	20
	F	94	1	....	....	....	....	1	....	....	....	....	1	3	5	10	24	28	20
76. General paralysis of the insane	M	27	....	....	....	....	....	....	....	....	....	....	4	10	10	1	1	....	1
	F	8	....	....	....	....	....	....	....	....	....	....	....	3	3	1	1	....	....
77. Other forms of mental alienation	M	33	1	....	....	....	....	1	....	1	1	1	3	3	6	5	3	6	2
	F	90	....	....	....	....	....	....	....	....	....	....	5	7	27	16	21	13	1
78. Epilepsy	M	68	2	....	....	....	....	2	4	2	8	3	5	11	9	10	8	3	3
	F	63	2	1	1	....	1	5	2	4	5	6	4	11	10	5	6	3	2
79. Convulsions (non-puerperal 5 years and over)	M	11	....	....	....	....	....	....	2	1	1	....	....	2	2	1	1	....	1
	F	10	....	....	....	....	....	....	2	....	1	1	1	2	....	....	1	1	....
80. Infantile convulsions (under 5 years of age)	M	126	108	13	3	1	1	126	....	....	....	....	....	....	....	....	....	....	....
	F	76	62	10	2	1	1	76	....	....	....	....	....	....	....	....	....	....	....
81. Chorea	M	5	....	....	....	....	....	....	....	1	....	1	....	1	1	1	....	....	....
	F	6	....	....	....	....	....	....	2	....	2	....	....	1	1	....	....	....	....
82. Neuralgia and neuritis	M	19	....	....	....	....	....	....	....	....	....	....	....	....	1	1	5	8	4
	F	25	....	....	....	....	....	....	....	....	....	....	1	3	4	2	4	8	3
83. Softening of the brain	M	14	....	....	....	....	....	....	....	....	....	....	....	....	....	2	6	3	3
	F	17	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	8	7
84. Other diseases of the nervous system	M	68	7	2	1	1	1	12	4	2	3	3	1	8	8	13	7	2	5
	F	70	7	..	1	....	....	8	7	...	1	1	2	9	8	18	6	9	....
85. Diseases of the eyes and annexa	M	1	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....
86. Diseases of the ears and mastoid sinus	M	34	8	1	2	....	....	11	7	2	3	....	1	1	2	2	1	3	....
	F	37	8	1	....	....	....	9	8	2	2	1	2	1	3	2	4	2	1
IV.—Diseases of the Circulatory System.																			
**Total	M	2773	27	5	4	4	4	44	23	17	23	33	33	99	129	345	620	867	466
**Total	F	2587	18	7	2	2	1	30	12	30	31	24	32	87	133	292	518	806	504
87. Pericarditis	M	9	1	....	....	1	....	2	1	..	1	....	....	1	....	1	1	2	....
	F	8	....	....	....	....	....	....	....	1	....	....	....	....	1	2	3	....	1
88. Acute endocarditis and myocarditis (acute)	M	180	4	1	1	1	....	7	13	10	4	13	11	30	38	44	4	6	....
	F	171	3	1	2	1	....	7	6	9	13	13	9	31	27	48	1	2	4
89. Angina pectoris	M	146	1	....	....	....	....	1	....	....	....	....	1	2	14	30	54	39	5
	F	64	....	....	....	....	....	....	....	1	....	....	1	1	3	6	18	25	....

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	116	8	9	5	114	21	3	...	...	11	15	17	13	15	9	9	5	12	13	10	9
...	...	...	85	9	4	1	79	17	3	..	..	9	12	13	9	10	10	6	8	7	5	5	5
...	...	...	92	6	8	4	88	19	3	...	...	9	12	12	11	12	8	6	3	8	12	9	8
...	...	...	68	7	2	...	61	13	3	...	...	7	10	12	8	5	8	4	7	3	4	4	5
...	...	...	24	2	1	1	26	2	....	...	..	2	3	5	2	3	1	3	2	4	1	1	1
...	...	...	17	2	2	1	18	4	....	...	...	2	2	1	1	5	2	2	1	4	1	1	....
...	...	...	17	2	....	...	3	14	2	...	...	2	3	2	1	....	....	1	....	4	4	....	2
...	...	...	7	2	1	...	3	5	2	...	...	....	....	....	1	....	2	....	....	....	1	2	4
...	..	1	81	30	3	2	33	66	17	...	...	11	7	9	7	12	13	11	10	8	12	6	10
...	...	...	88	19	5	1	44	42	26	...	1	10	7	3	11	8	7	13	15	7	15	8	9
17	...	...	513	191	44	14	142	440	177	...	3	64	50	54	46	78	57	55	76	55	72	61	94
24	..	1	509	201	55	26	92	320	377	...	2	64	59	84	64	77	58	58	67	49	68	58	85
17	...	...	499	180	43	14	137	421	175	...	3	64	49	50	45	76	53	54	75	53	69	58	90
23	..	1	490	196	50	24	89	303	366	...	2	62	58	81	62	72	55	56	62	47	67	55	83
...	...	...	14	11	1	...	5	19	2	...	...	....	1	4	1	2	4	1	1	2	3	3	4
1	...	...	19	5	5	2	3	17	11	...	...	2	1	3	2	5	3	2	5	2	1	3	2
1	...	...	101	49	14	3	32	100	34	...	1	21	11	15	19	18	10	14	10	13	11	12	13
5	...	...	116	47	10	7	28	74	77	...	1	11	17	19	15	15	18	22	9	17	17	7	13
...	...	...	36	20	4	2	9	38	15	...	...	7	5	4	11	8	4	1	3	4	4	6	5
3	...	...	55	26	3	2	12	33	40	...	1	5	8	6	6	11	12	8	6	7	7	2	8
1	...	...	65	29	10	1	23	62	19	...	1	14	6	11	8	10	6	13	7	9	7	6	8
2	..	..	61	21	7	5	16	41	37	...	...	6	9	13	9	4	6	14	3	10	10	5	5
...	...	...	15	4	3	5	13	13	....	....	1	4	2	1	1	4	....	6	3	1	3	2	....
...	...	...	4	....	2	2	2	5	1	...	...	....	....	....	....	1	....	3	1	....	....	1	2
...	..	1	23	7	3	...	17	13	3	...	...	1	2	5	6	6	2	2	2	3	1	....	3
...	...	...	68	15	4	3	27	50	12	1	...	4	6	6	4	10	6	6	9	9	16	4	10
...	...	...	54	8	2	4	46	17	5	...	...	2	6	9	7	13	....	12	3	4	1	4	7
...	...	...	50	8	4	1	39	21	3	...	...	5	7	8	....	3	7	5	4	10	3	3	8
...	...	...	10	1	....	...	5	5	1	...	...	2	....	1	....	....	1	1	2	1	1	1	1
1	...	...	8	1	....	1	5	4	1	...	...	....	3	....	2	2	....	....	....	1	....	....	2
...	...	...	125	....	1	...	126	....	....	...	...	10	9	12	18	15	8	7	11	12	8	9	7
...	...	...	74	1	....	1	76	....	....	...	...	8	2	8	7	8	9	5	3	6	4	5	11
...	...	...	3	1	....	1	2	2	1	...	...	....	2	....	....	1	....	....	....	....	....	2	....
...	...	...	6	....	....	...	4	2	....	...	...	1	....	....	1	....	1	....	....	1	....	1	1
...	...	...	14	4	1	...	2	15	2	...	...	....	2	3	1	3	2	....	4	1	1	1	1
...	...	...	19	4	2	...	6	11	8	...	...	2	2	1	4	1	4	1	3	3	2	2	....
...	...	...	9	5	....	...	4	6	4	...	...	1	....	....	1	1	....	1	2	2	2	....	4
1	...	...	9	8	....	...	1	5	11	...	...	....	1	2	2	2	....	1	2	4	1	....	2
...	...	...	50	12	5	1	33	29	6	...	...	3	5	5	7	6	5	6	8	7	7	4	5
...	...	1	53	14	2	1	33	25	12	...	...	5	6	4	5	8	7	10	7	5	2	4	7
...	...	...	.....	1	....	...	1	....	....	...	...	....	....	....	....	....	....	1	....	....	....	....	....
1	...	...	30	1	3	...	26	6	2	...	...	2	2	3	7	4	....	5	1	....	2	4	4
...	...	...	28	6	1	2	23	11	3	...	...	4	1	4	5	4	4	5	2	3	3	1	1
71	1	2	1796	732	168	77	514	1630	615	...	14	271	240	261	240	273	198	185	192	192	220	241	260
80	7	1	1710	666	150	61	449	973	1162	...	3	226	227	236	259	232	192	195	185	167	239	222	207
...	...	...	7	1	1	...	5	3	1	...	...	1	2	....	1	1	1	....	1	....	....	1	1
...	...	...	5	3	....	...	4	3	1	...	...	1	1	....	1	....	1	1	1	1	....	1	....
...	...	...	115	49	13	3	73	103	4	...	...	18	8	21	11	9	17	23	15	7	15	15	21
1	...	...	126	31	10	4	63	91	17	...	...	8	13	23	18	14	8	12	20	11	15	14	15
1	...	...	103	30	8	5	13	113	20	...	...	18	7	16	13	19	8	5	10	11	13	10	16
2	...	...	49	10	5	...	8	30	26	...	...	3	4	5	5	7	6	3	5	3	5	12	6

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																	
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
90. Other diseases of the heart	M	1371	7	2	2	1	2	14	7	6	16	19	17	52	51	159	342	443	209
	F	1445	5	4	...	...	1	10	4	17	15	7	14	51	76	156	330	467	256
91. Diseases of the arteries	M	1003	1	...	...	...	...	1	...	1	...	1	2	10	20	105	209	370	247
	F	821	...	...	...	...	...	...	...	...	...	...	...	1	19	69	158	305	226
91A. Aneurysm	M	31	...	...	...	...	...	...	...	1	...	...	1	2	7	9	7	3	1
	F	7	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	3	...
91B. Arteriosclerosis	M	955	1	...	...	...	...	1	...	...	...	1	1	8	13	93	197	362	242
	F	793	...	...	...	...	...	...	...	...	...	...	...	1	19	66	150	294	222
91C. Other diseases of the arteries	M	17	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5	5	4
	F	21	...	...	...	...	...	...	...	...	...	...	...	...	...	2	5	8	4
92. Embolism and thrombosis (not cerebral)	M	25	2	...	...	...	...	2	1	...	...	...	1	1	4	2	6	4	4
	F	33	1	...	...	...	...	1	...	1	1	2	6	2	5	3	5	3	4
93. Diseases of the veins (varices, haemorrhoids, phlebitis, etc.)	M	6	...	...	...	...	...	...	1	...	...	...	...	...	1	2	1	...	1
	F	21	...	...	...	...	...	...	1	1	...	1	1	1	1	8	1	3	3
94. Diseases of the lymphatic system (lymphangitis, etc.)	M	12	8	2	1	...	1	12	...	...	...	...	...	...	...	...	...	...	...
	F	10	5	2	...	1	...	8	1	...	...	...	...	...	...	...	1	...	...
95. Haemorrhage, without specified cause	M	21	3	...	...	1	1	5	...	...	2	...	1	3	1	2	3	3	1
	F	14	4	...	...	...	...	4	...	...	2	1	1	...	1	...	1	1	3
V.—DISEASES OF THE RESPIRATORY SYSTEM.																			
Total	M	2100	480	109	30	15	21	655	44	18	29	35	37	118	150	182	254	335	204
Total	F	1852	345	93	31	19	18	506	29	17	25	30	28	91	90	125	257	379	230
97. Diseases of the nasal fossae and their annexa	M	3	...	...	...	...	1	1	1	...	...	...	...	...	1	...	...	...	...
	F	3	2	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...
98. Diseases of the larynx	M	24	7	1	2	2	2	14	5	1	1	1	...	...	...	1	...	1	...
	F	22	5	1	3	3	3	15	1	...	1	1	...	1	...	1	1	...	1
99. Bronchitis	M	230	71	12	...	2	5	90	3	1	1	...	1	3	6	9	18	51	39
	F	280	53	12	2	...	1	68	3	...	1	1	...	4	3	14	32	81	57
99A. Bronchitis, acute	M	38	14	4	...	1	1	20	2	...	...	...	...	1	1	2	1	5	5
	F	66	15	3	2	...	...	20	2	...	1	1	...	1	...	3	8	18	9
99B. Bronchitis, chronic	M	47	...	1	...	...	...	1	...	...	...	...	...	...	2	2	9	19	13
	F	51	...	...	...	...	...	...	...	...	...	...	...	...	2	3	11	22	9
99C. Bronchitis, not otherwise defined, under 5 years	M	69	57	7	...	1	4	69	...	...	...	...	...	...	...	...	...	...	...
	F	48	38	9	...	...	1	48	...	...	...	...	...	...	...	...	...	...	...
99D. Bronchitis, not otherwise defined, 5 years and over	M	76	...	...	...	...	...	...	1	1	1	...	1	2	3	5	8	27	21
	F	115	...	...	...	...	...	...	1	...	...	...	...	3	1	8	13	41	39
100. Broncho-pneumonia (incl. capillary bronchitis)	M	473	215	51	14	5	2	287	11	4	2	3	2	12	12	19	25	53	32
	F	413	154	45	13	6	4	222	10	1	5	9	4	17	10	11	30	53	37
100A. Broncho-pneumonia	M	459	207	48	13	5	2	275	11	4	2	3	2	12	12	19	24	52	32
	F	404	149	45	12	6	3	215	10	1	5	9	4	17	10	11	30	52	36
100B. Capillary bronchitis	M	14	8	3	1	...	...	12	...	...	...	...	...	...	...	...	1	1	...
	F	9	5	...	1	...	1	7	...	...	...	...	...	...	...	...	...	1	1
101. Pneumonia	M	1163	177	45	14	5	9	250	20	9	23	25	30	86	118	120	176	183	107
	F	956	125	33	13	8	10	189	13	13	16	17	21	59	60	83	160	199	105
101A. Lobar	M	317	22	11	2	...	4	39	6	5	14	10	14	35	51	42	39	38	21
	F	220	19	6	3	1	3	32	2	5	6	3	4	27	21	29	38	37	13
101B. Pneumonia, not otherwise defined	M	846	155	34	12	5	5	211	14	4	9	15	16	51	67	78	137	145	86
	F	736	106	27	10	7	7	157	11	8	10	14	17	32	39	54	122	162	92
102. Pleurisy	M	66	...	...	...	1	2	3	3	1	2	4	2	10	3	13	11	8	4
	F	49	...	...	...	2	...	2	1	1	1	2	...	2	7	6	12	7	7
103. Congestion and haemorrhagic infarct of the lung	M	43	9	...	...	...	...	9	1	1	...	...	1	...	...	4	6	15	6
	F	40	4	1	...	...	...	5	...	...	...	...	...	2	1	1	4	11	13

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
34	..	2	894	349	86	42	256	811	298	...	6	128	117	123	119	134	87	80	100	104	115	118	146
39	3	..	947	386	81	31	226	561	655	...	3	137	120	122	136	125	111	113	100	95	135	115	136
36	1	..	635	287	55	26	138	577	281	...	7	92	99	94	91	108	83	74	61	65	71	93	72
38	4	1	524	221	52	24	124	251	446	...	...	68	79	78	90	81	62	63	53	50	78	72	47
...	...	...	17	8	4	2	6	19	5	...	1	4	5	....	3	2	1	1	3	3	3	2	4
...	...	...	6	1	...	...	1	2	4	...	...	1	...	...	1	...	...	2	2	....	1	...	...
36	1	..	608	274	49	24	128	549	272	...	6	87	92	92	87	103	81	73	58	62	66	89	65
36	4	1	504	214	51	24	121	241	431	...	...	65	77	77	88	79	61	59	48	49	75	70	45
...	...	...	10	5	2	...	4	9	4	...	...	1	2	2	1	3	1	...	...	...	2	2	3
2	...	...	14	6	1	...	2	8	11	...	...	2	2	1	1	2	1	2	3	1	2	2	2
...	...	...	14	9	2	...	6	12	7	...	...	5	3	4	1	2	1	....	2	2	2	1	2
...	...	...	22	9	1	1	4	21	8	...	...	4	2	3	3	5	1	1	4	1	5	2	2
...	...	...	4	2	...	...	3	1	2	...	...	...	1	....	1	...	...	...	...	1	2	....	1
...	...	...	17	3	1	...	4	10	7	...	...	1	3	3	1	....	1	1	1	4	1	4	1
...	...	...	9	1	1	1	12	...	...	...	...	2	3	2	3	...	...	...	...	1	...	...	1
...	...	...	9	...	...	1	9	1	...	...	...	3	3	1	1	....	1	....	1	...	...	...	...
...	...	...	15	4	2	...	8	10	2	...	1	7	....	1	...	...	1	3	3	1	2	3	....
...	...	...	11	3	...	...	7	5	2	...	...	1	2	1	4	....	1	1	....	2	....	2	....
33	2	4	1530	411	110	49	1007	794	296	...	3	286	292	303	239	163	101	69	70	103	136	149	189
39	..	6	1365	368	80	39	769	563	516	...	4	244	256	299	211	151	102	67	49	69	94	142	168
...	...	..	3	....	...	...	3	...	...	...	...	...	...	1	....	1	...	...	...	...	1	...	....
...	...	...	2	...	1	...	3	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...
...	...	...	20	1	1	...	19	2	1	...	...	4	3	4	1	...	1	...	3	1	...	2	3
...	...	...	21	2	1	...	22	2	...	...	...	3	6	4	2	...	...	2	1	1	....	1	4
8	...	...	171	47	10	2	116	75	39	...	...	33	26	35	31	18	11	12	11	9	14	14	16
14	...	2	194	69	11	6	104	72	103	...	1	28	38	54	34	22	17	14	9	9	15	18	22
1	...	...	29	7	2	...	23	11	4	...	...	6	3	10	5	1	1	....	...	...	3	4	5
3	...	...	52	11	2	1	30	15	20	...	1	9	8	11	10	1	2	4	1	3	4	7	6
1	...	...	34	11	2	...	9	22	16	...	...	6	6	3	5	6	3	7	4	1	2	2	2
3	..	1	30	19	2	...	5	21	25	...	...	8	6	7	1	6	6	2	4	2	3	4	2
...	...	...	67	....	2	...	69	...	...	...	...	14	9	15	12	4	1	2	2	3	1	5	1
...	...	...	46	1	....	1	48	...	...	...	...	3	10	11	7	5	3	3	1	1	1	2	1
6	...	...	41	29	4	2	15	42	19	...	...	7	8	7	9	7	6	3	5	5	8	3	8
8	..	1	66	38	7	4	21	36	58	...	...	8	14	25	16	10	6	5	3	3	7	5	13
8	1	2	383	64	17	9	333	99	41	...	...	58	75	75	63	34	25	12	12	18	34	30	37
4	...	...	341	51	11	10	266	69	77	...	1	55	70	79	39	24	13	19	6	16	17	35	40
8	1	2	370	64	17	8	321	98	40	...	...	55	74	75	59	33	25	11	12	17	33	30	35
4	...	...	333	51	11	9	259	69	75	...	1	53	70	77	38	24	11	19	6	16	16	34	40
...	...	...	13	....	....	1	12	1	1	...	...	3	1	....	4	1	....	1	....	1	1	....	2
...	...	...	8	...	...	1	7	....	2	...	...	2	....	2	1	....	2	....	...	....	1	1	....
15	..	1	813	248	70	32	479	499	182	...	3	168	170	162	130	91	55	23	37	49	71	92	115
17	..	4	694	199	46	17	337	353	265	...	1	140	130	142	112	84	57	29	21	30	47	74	90
3	...	...	200	82	24	11	123	151	43	...	...	41	35	46	39	29	20	7	7	9	22	30	32
3	..	..	158	46	12	4	71	95	54	...	...	26	20	29	27	13	20	5	4	5	15	25	31
12	..	1	613	166	46	21	356	348	139	...	3	127	135	116	91	62	35	16	30	40	49	62	83
14	..	4	536	153	34	13	266	258	211	...	1	114	110	113	85	71	37	24	17	25	32	49	59
1	1	..	45	18	2	1	20	34	12	...	...	9	4	10	7	3	5	8	2	7	6	1	4
1	...	...	34	12	3	...	13	18	18	...	...	7	2	6	5	6	5	4	1	2	3	3	5
...	...	...	37	4	1	1	14	18	11	...	...	5	6	3	3	6	2	3	2	3	3	5	2
3	...	...	24	11	2	3	10	10	19	...	1	3	9	5	5	6	1	1	1	4	1	2	2

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																	
		Total.	Under 1 year	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
104. Gangrene of the lung	M	1																1	
105. Asthma	M	60												2	6	9	12	17	12
	F	68											2	5	7	7	16	23	8
106. Pulmonary emphysema	M	4										1						2	1
	F	3															2	1	
107. Other diseases of the respiratory system (tuberculosis excepted)	M	33	1					1		1		1	1	4	5	7	6	4	3
	F	18	2	1				3	1	1	1		1	1	2	2		4	2
107A. Chronic interstitial pneumonia including occupational diseases of the lung	M	1														1			
107B. Diseases of the mediastinum	M	1															1		
107C. Others under this title	M	31	1					1		1		1	1	4	5	6	5	4	3
	F	18	2	1				3	1	1	1		1	1	2	2		4	2
VI.—DISEASES OF THE DIGESTIVE SYSTEM.																			
**Total	M	1808	754	128	40	24	19	965	63	35	31	22	44	73	78	133	146	131	77
**Total	F	1606	533	97	22	24	28	704	53	49	26	38	33	87	94	101	138	162	101
108A. Diseases of the mouth and annexa	M	21	8	4			1	13	1				1			1	3	2	
	F	12	6	2				8						1	3				
108B. Other diseases of the buccal cavity	M	8	1	1				2			1			1			2	2	
	F	11	4	1		1		5	1	1			1			1		1	
109. Diseases of the pharynx and tonsils (including adenoid vegetations)	M	58	9	5	4	3	2	23	9	4	1		3	4	4	1	4	3	2
	F	64	3	7	1	2	3	16	7	8	4	10	3	5	5	3	1	1	1
110. Diseases of the oesophagus	M	4			1			1									1	1	1
	F	7	1					1							1	2	2		1
111. Ulcer of the stomach, duodenum	M	91								2		5	4	16	14	18	21	8	2
	F	43								1		2		6	6	8	11	7	2
111A. Ulcer of the stomach	M	56								2		1	2	6	10	11	16	5	2
	F	35								1		2		5	5	7	9	4	2
111B. Ulcer of the duodenum	M	35										4	2	10	4	7	5	3	
	F	8												1	1	1	2	3	
112. Other diseases of the stomach (cancer excepted)	M	137	24	2	3	4		33		2	2	1	1	5	10	20	25	23	11
	F	127	9	1		3	3	16	4	2	1	3		8	5	8	24	33	19
113. Diarrhoea and enteritis, under 2 years	M	772	671	101				772											
	F	555	473	82				555											
114. Diarrhoea and enteritis, 2 years and over	M	133			23	11	7	41	19	2		1	1	5	2	2	11	23	23
	F	159			17	9	9	35	12	4		2	2	6	8	6	12	32	29
116. Diseases due to other intestinal parasites	M	3				1		1	1		1								
	F	2		1			1	2											
116E. Other parasites specified	M	3				1		1	1		1								
	F	2		1			1	2											
117. Appendicitis and typhlitis	M	199		2	3	3	4	12	19	17	22	7	23	25	19	33	12	9	1
	F	145	1		1	5	7	14	21	24	15	12	9	14	13	11	10	2	
118. Hernia, intestinal obstruction	M	155	27	9	1	2	3	42	4	3	3	5	3	4	10	15	28	21	17
	F	131	22	2			3	27	2	2	1		1	14	14	15	18	19	15
118A. Hernia	M	46	7	2	1		1	11	1		1	2	1	2	1	6	7	6	8
	F	28	2					2						2	3	4	5	4	8

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
1	..	1	35	16	6	3	12	41	7	...	...	8	3	8	2	7	2	4	1	10	5	3	7
...	...	...	39	23	4	2	9	32	27	...	...	6	3	8	13	5	4	....	5	5	8	6	5
...	...	...	2	1	1	...	1	3	...	...	...	1	....	1	....	....	....	....	....	....	....	1	1
...	...	...	1	1	1	...	.....	1	2	...	...	...	....	1	....	....	....	....	....	....	....	1	1
...	...	...	19	11	2	1	7	22	4	...	...	1	2	4	1	3	1	5	4	5	2	2	3
...	...	...	16	1	....	1	8	6	4	...	...	1	....	....	2	3	4	....	3	2	2	1	....
...	...	..	.....	1	...	...	.....	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
...	...	..	.....	1	...	...	.....	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
...	...	...	19	9	2	1	7	20	4	...	...	1	2	3	1	3	1	5	3	5	2	2	3
...	...	..	16	1	....	1	8	6	4	...	...	1	....	....	2	3	4	....	3	2	2	1	....
7	..	3	1518	167	82	41	1239	435	129	...	5	118	113	108	99	99	98	168	296	320	173	124	92
17	1	2	1308	194	67	27	953	418	235	...	...	107	97	97	92	93	99	148	223	293	148	105	104
...	...	...	18	3	....	...	14	7	....	...	...	1	1	1	1	2	2	....	2	3	3	5	....
...	...	...	11	1	....	...	9	3	....	...	...	....	....	2	1	....	....	3	1	2	....	3	....
...	...	...	5	1	2	...	3	4	1	...	...	1	2	1	....	....	2	....	....	1	....	1	....
...	...	...	10	....	1	...	9	1	1	...	...	....	2	2	1	....	....	....	2	1	1	2	....
...	...	...	47	4	1	6	40	16	2	...	...	6	3	8	5	5	3	2	8	7	4	4	3
...	...	...	51	7	6	...	51	11	2	...	...	2	5	8	6	6	4	5	4	8	4	6	1
...	...	...	1	3	....	...	1	3	....	...	...	....	....	....	....	....	1	....	....	1	1	1	....
...	...	...	4	2	1	...	2	3	2	...	...	....	....	1	....	1	....	2	....	....	1	1	1
...	..	1	65	17	7	2	22	60	8	...	1	5	7	7	1	9	9	11	7	9	8	10	8
...	...	...	33	8	2	...	9	22	12	...	...	4	6	4	....	6	5	2	3	4	4	2	3
...	..	1	40	10	6	...	12	36	7	...	1	4	4	2	....	5	6	6	7	5	5	7	5
...	...	...	26	7	2	...	7	18	10	...	...	4	5	4	....	4	5	1	1	3	3	2	3
...	...	...	25	7	1	2	10	24	1	...	...	1	3	5	1	4	3	5	....	4	3	3	3
...	...	...	7	1	....	...	2	4	2	...	...	....	1	....	....	2	....	1	2	1	1	....	....
3	..	1	94	27	12	4	58	63	15	...	1	12	15	11	17	6	6	13	16	12	10	9	10
3	..	1	82	26	12	7	32	52	43	...	...	11	10	11	11	8	15	9	11	14	10	10	7
...	...	...	757	3	4	8	772	.....	.....	.....	.....	34	22	32	32	34	21	77	183	201	80	33	23
...	...	...	543	2	2	8	555	.....	.....	.....	.....	24	17	20	23	15	17	55	117	172	55	21	19
2	..	1	100	24	3	6	72	43	18	...	...	3	8	4	....	3	5	8	27	35	20	15	5
9	1	1	126	25	6	2	69	37	53	...	...	4	10	5	3	6	4	10	30	37	24	11	15
...	...	...	3	....	....	...	3	.....	.....	.....	.....	....	1	1	....	.....	.....	.....	.....	1	.....	.....	....
...	...	...	2	....	....	...	2	.....	.....	.....	.....	....	....	....	1	.....	.....	.....	.....	1	.....	.....	....
...	...	...	3	....	....	...	3	.....	.....	.....	.....	....	1	1	....	.....	.....	.....	.....	1	.....	.....	....
...	...	...	2	....	....	...	2	.....	.....	.....	.....	....	....	....	1	.....	.....	.....	.....	1	.....	.....	....
...	...	...	148	27	21	3	103	81	13	...	2	14	21	14	21	15	13	21	17	17	20	14	12
...	...	...	121	14	9	1	93	46	6	...	...	12	13	10	11	12	16	19	14	9	11	9	9
...	...	...	112	26	11	6	74	59	22	...	...	15	16	9	10	7	13	15	20	16	10	9	15
3	...	...	92	30	8	1	41	54	36	...	...	10	10	9	6	5	13	15	9	12	9	15	18
...	...	...	31	8	4	3	20	21	5	...	...	4	4	2	7	4	4	5	5	2	4	3	2
...	...	...	21	6	1	...	4	13	11	...	...	.....	2	....	2	....	6	4	1	....	2	4	7

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
118B. Intestinal obstruction	M	109	20	7	..	2	2	31	3	3	2	3	2	2	9	9	21	15	9
	F	103	20	2	..	..	3	25	2	2	1	..	1	12	11	11	13	15	7
119. Other diseases of the intestines	M	47	3	1	5	..	..	9	2	1	..	2	1	6	2	6	8	5	4
	F	55	8	1	2	..	1	12	2	1	..	1	1	4	6	8	5	10	5
120. Acute yellow atrophy of the liver	M	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	F	7	..	..	..	1	..	1	..	..	..	..	..	1	2	..	1	2	..
122. Cirrhosis of the liver.*	M	43	..	..	..	..	..	..	..	..	..	..	1	..	6	11	9	13	2
	F	37	..	..	..	..	..	..	..	..	..	..	..	..	2	6	10	11	8
122B. Cirrhosis of the liver, not specified as alcoholic	M	43	..	..	..	..	..	..	..	..	..	..	1	..	6	11	9	13	2
	F	37	..	..	..	..	..	..	..	..	..	..	..	..	2	6	10	11	8
123. Biliary calculi	M	24	..	..	..	..	..	..	..	..	..	..	..	2	2	5	7	6	2
	F	67	..	..	..	..	..	..	..	..	..	..	4	6	11	14	14	11	6
124. Other diseases of the liver	M	69	5	2	..	..	1	8	2	..	..	1	3	2	7	13	12	13	8
	F	103	..	..	..	1	..	1	..	1	..	..	3	8	11	12	25	27	14
125. Diseases of the pancreas	M	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1
	F	3	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..
126. Peritonitis, without specified cause	M	32	6	1	..	..	1	8	5	4	1	..	2	2	..	5	1	2	2
	F	62	5	..	..	2	1	8	4	4	5	7	8	9	7	3	4	2	1
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	M	7	..	..	..	..	..	..	1	..	..	..	1	..	2	1	2	..	..
	F	16	1	..	1	..	..	2	..	1	..	1	1	3	..	3	1	4	..
VII.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ANNEXA.																			
**Total	M	981	23	4	6	..	3	36	9	9	16	18	21	47	56	102	198	284	162
**Total	F	736	12	3	5	2	3	25	7	3	15	18	37	87	92	99	124	134	79
128. Acute nephritis	M	92	18	4	6	..	3	31	9	1	6	4	1	3	7	7	12	8	1
	F	75	9	1	3	1	2	16	6	2	1	3	3	8	5	14	5	5	6
129. Chronic nephritis, (Bright's disease)	M	520	..	..	..	..	..	..	..	6	9	11	14	38	40	75	123	125	70
	F	458	..	..	2	..	..	2	1	1	7	10	12	33	52	67	97	112	51
131. Other diseases of the kidneys and their annexa (diseases of kidneys in pregnancy excluded)	M	52	5	..	..	..	..	5	..	1	..	3	3	2	4	5	7	17	2
	F	54	3	1	..	1	1	6	..	..	2	1	2	8	10	5	7	5	7
132. Calculi of the urinary passages	M	15	..	..	..	..	..	..	..	..	..	..	1	1	3	2	1	5	2
	F	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1
133. Diseases of the bladder	M	86	..	..	..	..	..	..	..	..	1	1	..	1	1	4	12	38	25
	F	19	..	1	..	..	..	1	..	..	..	..	..	1	1	..	3	5	7
134. Diseases of the urethra, urinary abscess, etc*	M	6	..	..	..	..	..	..	..	..	..	..	1	1	..	2	1	1	..
	F	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
134A. Stricture of the urethra	M	4	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..
134B. Other diseases of the urethra	M	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..
	F	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
135. Diseases of the prostate	M	205	..	..	..	..	..	..	..	..	..	..	..	..	1	6	41	90	61
136. Non-venereal diseases of the male genital organs	M	5	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	1
137. Cysts and other benign tumors of the ovary	F	22	..	..	..	..	..	..	..	..	1	..	2	2	3	5	2	3	4
138. Salpingitis and pelvic abscess	F	25	..	..	..	..	..	..	..	..	2	1	7	14	1	..	..	..	..

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

90 to 99 years.	100 years and over.	Not stated.	NATIVITY: Canada.	British.	Foreign.	Not stated.	SOCIAL CONDITION: Single.	Married.	Widowed.	Divorced.	Not stated.	MONTHS: January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	..	81	18	7	3	54	38	17	...	...	11	12	7	3	3	9	10	15	14	6	6	13
3	...	..	71	24	7	1	37	41	25	...	...	10	8	9	4	5	7	11	8	12	7	11	11
1	...	..	40	4	2	1	19	21	7	...	...	4	5	....	2	3	8	7	3	2	7	3	3
...	...	..	40	11	4	...	23	22	10	...	...	3	3	5	3	9	6	5	4	6	2	5	4
...	...	..	1	....	1	...	.....	2	.....	...	...	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
...	...	..	5	2	.....	...	1	5	1	...	...	4	.....	.....	.....	1	.....	.....	.....	1	.....	1	.....
1	...	..	31	6	5	1	8	22	12	...	1	2	2	8	2	3	4	5	2	5	3	5	2
...	...	..	20	12	4	1	1	22	14	...	...	5	....	5	3	4	2	2	4	4	3	3	2
1	...	..	31	6	5	1	8	22	12	...	1	2	2	8	2	3	4	5	2	5	3	5	2
...	...	..	20	12	4	1	1	22	14	...	...	5	....	5	3	4	2	2	4	4	3	3	2
...	...	..	17	5	2	...	3	4	17	...	...	3	1	2	1	2	3	4	....	2	2	2	2
1	...	..	44	18	4	1	8	37	22	...	...	5	5	3	5	4	4	6	10	7	8	4	6
...	...	...	46	12	9	2	21	36	12	...	...	10	4	4	5	7	4	3	6	5	5	10	6
1	...	..	70	22	5	6	15	61	27	...	...	9	7	5	10	11	9	9	6	8	12	7	10
...	...	...	.....	2	1	...	1	2	.....	...	...	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1
...	...	...	3	.....	.....	...	3	.....	.....	...	...	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....
...	...	...	28	2	1	1	22	9	1	...	...	6	3	6	1	3	3	1	3	3	....	2	1
...	...	...	51	8	3	...	25	34	3	...	...	14	4	7	7	4	1	5	7	5	3	3	2
...	...	...	5	1	....	1	3	3	1	...	...	1	1	....	1	....	1	....	1	....	....	1	1
...	...	...	10	6	....	...	5	8	3	...	...	....	5	....	1	1	2	1	....	2	1	1	2
19	1	3	625	253	76	27	231	548	198	...	4	92	76	92	101	78	66	79	74	68	90	85	80
14	..	2	494	169	57	16	140	399	192	...	5	73	64	88	58	59	41	47	50	71	60	61	64
2	...	..	70	15	4	3	61	24	7	...	...	10	7	11	5	9	6	8	7	6	9	9	5
1	...	..	53	11	7	4	34	27	14	...	...	10	9	10	7	5	....	3	4	5	6	8	8
6	1	2	346	119	41	14	111	315	91	...	3	53	46	50	55	42	34	34	44	33	44	41	44
11	..	2	312	109	27	10	69	245	139	...	5	38	41	59	36	38	26	30	34	45	35	35	41
2	..	1	34	12	4	2	20	26	6	...	...	3	4	5	6	4	6	6	2	4	3	3	6
1	...	..	38	12	4	...	15	26	13	...	...	7	4	5	8	5	3	4	6	3	2	4	3
...	...	..	9	4	2	...	2	8	5	...	...	....	1	3	2	1	1	1	1	2	....	2	1
..	...	..	.....	.....	3	...	.....	1	2	...	...	.....	.....	.....	.....	.....	.....	.....	1	1	...	1	....
3	...	..	46	30	9	1	14	42	29	...	1	9	6	4	9	6	3	11	7	9	7	5	10
1	...	..	9	9	1	...	2	7	10	...	...	1	1	2	1	1	3	....	1	2	2	3	2
...	...	..	3	1	2	...	1	4	1	...	...	1	....	....	....	....	1	2	1	....	1	....	....
...	...	..	1	....	....	...	.....	1	....	...	...	....	....	....	....	....	....	....	....	....	....	....	1
...	...	..	2	1	1	...	.....	3	1	...	...	....	....	....	....	....	....	2	1	....	1	....	....
...	...	..	1	....	1	...	1	1	....	...	...	1	....	....	....	....	1	....	....	....	....	....	....
...	...	..	1	....	....	...	.....	1	....	...	...	....	....	....	....	....	....	....	....	....	....	....	1
6	...	..	114	72	13	6	22	126	57	...	...	15	12	19	23	16	14	17	12	13	26	24	14
...	...	..	3	....	1	1	.....	3	2	...	...	1	....	....	1	....	1	....	....	1	....	1	....
...	...	..	18	2	2	...	3	15	4	...	...	1	....	1	1	2	1	3	1	4	5	2	1
...	...	..	13	7	5	...	3	22	....	...	...	5	3	2	....	5	2	3	1	1	1	....	2

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
139. Benign tumors of the uterus	F	30											2	5	12	2	7	1	1
140. Non-puerperal uterine haemorrhage	F	8											1	2	1	1	1	1	1
141. Other diseases of the female genital organs	F	38									2	3	7	13	7	4	1		1
142. Non-puerperal diseases of the breast (cancer excepted.)	F	3												1				2	
VIII.—THE PUERPERAL STATE.																			
**Total	F	387									22	51	93	174	47				
143 Accidents of pregnancy*	F	98									3	9	24	50	12				
143A. Abortion	F	39									2	4	7	22	4				
143.B Ectopic gestation	F	11										1	2	7	1				
143C. Other accidents of pregnancy	F	48									1	4	15	21	7				
144. Puerperal haemorrhage	F	47									2	5	6	24	10				
145. Other accidents of childbirth*	F	48									3	4	12	26	3				
145A. Caesarean section	F	4											3	1					
145B. Other surgical operations and instrumental delivery	F	4											1	3					
145C. Others under this title	F	40									3	4	8	22	3				
146. Puerperal sepsis	F	75									6	13	23	26	7				
147. Phlegmasia alba dolens; puerperal embolism or sudden death in puerperium	F	14									1	4		8	1				
148. Puerperal albuminuria and convulsions	F	81									7	12	23	29	10				
149. Following childbirth (not otherwise defined)	F	24										4	5	11	4				
IX.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																			
**Total	M	111	14			1		15		1	4	4	2	3	5	10	9	23	27
**Total	F	71	11	1	1			13				1		1	7	4	6	16	21
151. Gangrene	M	56	1					1					1	1	2	3	5	16	22
	F	42	1					1						1	1	1	6	13	17
152. Furuncle	M	11	2					2		1	1	1			1	2	1	1	1
	F	1	1					1											
153. Acute abscess	M	25	4					4			2	3	1	1	2	5		5	2
	F	18	5					5				1			6	2		1	3
155. Other diseases of the skin and annexa	M	19	7			1		8			1			1			3	1	2
	F	10	4	1	1			6								1		2	1
X.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																			
**Total	M	35	3			1		4	3	6	1	1	1	3	2	2	7	4	1
**Total	F	26	1	1		2	1	5	3	3	3	1		1			4	3	3
156. Diseases of the bones (tuberculosis excepted)	M	20	2			1		3	2	5	1			2	1	1	3	2	
	F	13		1		1	1	3	2	3	2			1				2	

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	22	6	2	...	10	16	4	...	...	2	3	3	2	...	3	1	2	5	3	3	3
...	...	...	5	2	....	1	.....	7	1	...	...	2	...	...	1	...	1	1	.....	.....	1	1	1
...	...	...	23	9	5	1	4	31	3	...	...	6	3	6	2	3	2	1	....	5	5	3	2
...	...	...	.....	2	1	...	.....	1	2	...	...	1	....	....	....	....	....	1	....	....	....	1	....
...	...	...	272	67	38	10	10	374	3	...	...	29	31	32	48	32	30	35	29	32	27	31	31
...	...	...	69	15	11	3	.....	96	2	...	...	7	8	8	9	4	6	11	7	9	10	13	6
...	...	...	24	6	6	3	.....	38	1	...	...	3	5	2	4	2	2	2	2	4	2	8	3
...	...	...	9	1	1	...	.....	11	.....	...	...	3	....	....	....	....	....	2	1	1	2	1	1
...	...	...	36	8	4	...	.....	47	1	...	...	1	3	6	5	2	4	7	4	4	6	4	2
...	...	...	31	11	4	1	2	44	1	...	...	4	3	4	7	3	5	3	2	3	5	3	5
...	...	...	33	11	3	1	3	45	....	...	...	6	6	2	3	4	4	3	3	3	7	3	4
...	...	...	2	1	....	1	1	3	....	...	...	2	....	....	....	1	....	....	1	....	....	....	....
...	...	...	4	....	....	....	.....	4	....	...	...	....	....	....	....	2	....	1	....	....	1	....	....
...	...	...	27	10	3	...	2	38	....	...	...	4	6	2	3	1	4	2	2	3	6	3	4
...	...	...	45	17	11	2	2	73	....	...	...	1	7	9	14	9	4	4	5	5	1	7	9
...	...	...	14	....	....	....	.....	14	....	...	...	2	1	1	3	1	....	2	2	1	....	1	....
...	...	...	62	10	9	...	3	78	....	...	...	7	4	6	7	7	8	11	7	9	4	4	7
...	...	...	18	3	....	3	.....	24	....	...	...	2	2	2	5	4	3	1	3	2	....	....	....
6	1	1	62	31	15	3	34	52	25	...	...	12	12	10	11	9	13	11	6	8	6	7	6
2	...	...	44	21	4	2	20	22	29	...	...	3	9	7	4	10	3	7	6	5	4	7	6
3	1	1	26	20	9	1	8	34	14	...	...	6	5	3	9	5	5	6	2	3	4	3	5
2	...	...	22	14	4	2	4	11	27	...	...	2	7	6	4	3	2	1	3	4	1	5	4
...	...	...	7	1	2	1	6	3	2	...	...	....	1	2	1	....	....	2	3	1	1	....	....
...	...	...	1	....	....	....	1	....	....	...	...	....	....	....	....	....	....	....	1	....	....	....	....
...	...	...	16	4	4	1	11	9	5	...	...	2	3	3	....	4	5	....	1	2	1	3	1
...	...	...	13	5	....	....	8	9	1	...	...	....	....	1	....	5	....	3	1	1	3	2	2
3	...	...	13	6	....	....	9	6	4	...	...	4	3	2	1	....	3	3	....	2	....	1	....
...	...	...	8	2	....	....	7	2	1	...	...	1	2	....	....	2	1	3	1	....	....	....	....
...	...	...	27	4	4	...	20	14	1	...	...	1	2	3	3	5	3	1	3	3	2	4	5
...	...	...	22	2	1	1	15	5	6	...	...	1	2	2	4	2	1	2	4	4	....	....	4
...	...	...	15	3	2	...	13	6	1	...	...	1	2	1	3	1	2	1	1	1	1	2	4
...	...	...	13	....	....	....	10	2	1	...	...	1	1	1	2	1	....	1	2	2	....	....	2

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 and 79 years.	80 to 89 years.
157. Diseases of the joints (tuberculosis and rheumatism excepted)	M	12	1	...	...	...	...	1	1	...	...	1	1	1	1	....	4	1	1
	F	9	1	...	...	...	...	1	...	...	1	1	....	....	....	....	2	1	3
158. Other diseases of the organs of locomotion	M	3	....	...	...	...	...	...	...	1	...	...	....	....	....	1	....	1	....
	F	4	....	...	...	1	...	1	1	...	...	...	....	....	....	....	2	....	....
XI.—Malformations.																			
**Total	M	277	264	9	1	..	...	274	1	1	1	...	....	....	....	....	....	....	....
**Total	F	216	206	5	2	1	...	214	2	...	..	...	....	....	....	....	....	....	....
159. Congenital malformations (still-births not included)	M	277	264	9	1	...	...	274	1	1	1	...	....	....	....	....	....	....	....
	F	216	206	5	2	1	...	214	2	...	...	...	....	....	....	....	....	....	....
159A. Hydrocephalus	M	17	17	...	...	...	...	17	...	...	...	...	....	....	....	....	....	....	....
	F	20	18	1	1	...	...	20	...	...	...	...	....	....	....	....	....	....	....
159B. Congenital malformations of the heart	M	121	112	5	1	...	...	118	1	1	1	...	....	....	....	....	....	....	....
	F	79	75	1	...	1	...	77	2	...	...	...	....	....	....	....	....	....	....
159C. Others under this title	M	139	135	4	...	...	...	139	...	...	...	...	....	....	....	....	....	....	....
	F	117	113	3	1	...	...	117	...	...	...	...	....	....	....	....	....	....	....
XII.—Diseases of Early Infancy.																			
**Total	M	1686	1686	...	...	...	...	1686	...	...	...	...	....	....	....	....	....	....	....
**Total	F	1222	1222	...	...	...	...	1222	...	...	...	...	....	....	....	....	....	....	....
160. Congenital debility, icterus and sclerema	M	613	613	...	...	...	...	613	...	...	...	...	....	....	....	....	....	....	....
	F	416	416	...	...	...	...	416	...	...	...	...	....	....	....	....	....	....	....
161. Premature birth, injury at birth	M	938	938	...	...	...	...	938	...	...	...	...	....	....	....	....	....	....	....
	F	692	692	...	...	...	...	692	...	...	...	...	....	....	....	....	....	....	....
161A. Premature birth	M	795	795	...	...	...	...	795	...	...	...	...	....	....	....	....	....	....	....
	F	612	612	...	...	...	...	612	...	...	...	...	....	....	....	....	....	....	....
161B Injury at birth	M	143	143	...	...	...	...	143	...	...	...	...	....	....	....	....	....	....	....
	F	80	80	...	...	...	...	80	...	...	...	...	....	....	....	....	....	....	....
162. Other diseases peculiar to early infancy	M	131	131	...	...	...	...	131	...	...	...	...	....	....	....	....	....	....	....
	F	113	113	...	...	...	...	113	...	...	...	...	....	....	....	....	....	....	....
163. Lack of care	M	4	4	...	...	...	...	4	...	...	...	...	....	....	....	....	....	....	....
	F	1	1	...	...	...	...	1	...	...	...	...	....	....	....	....	....	....	....
164. XIII.—Old Age.																			
Total	M	632	....	...	...	...	...	...	...	...	...	...	....	....	....	....	12	175	348
Total	F	772	....	...	...	...	...	...	...	...	...	...	....	....	....	....	13	186	403
XIV.—External Causes																			
*Total	M	1500	36	31	26	24	22	139	101	56	112	115	120	219	182	147	116	103	67
*Total	F	543	31	22	13	14	19	99	37	19	24	23	15	37	27	46	40	75	78
165. Suicide by solid or liquid poisons (corrosive substances excepted)	M	8	....	...	...	...	...	...	...	...	...	1	2	3	....	1	....	1	....
	F	10	....	...	...	...	...	...	...	...	1	....	....	1	2	5	1	....	....
166. Suicide by corrosive substances	M	7	....	...	...	...	...	...	...	...	...	...	1	1	4	....	....	1	....
	F	3	....	...	...	...	...	...	...	...	...	...	1	....	....	2	....	....	....

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December
...	...	...	9	1	2	...	6	6	...	...	...	...	...	2	...	4	1	...	1	2	...	1	1
...	...	...	6	2	1	...	3	2	4	...	...	...	...	1	2	1	1	1	1	1	...	...	1
...	...	...	3	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...
...	...	...	3	...	...	1	2	1	1	...	...	...	1	...	...	...	...	...	1	1	...	...	1
...	...	...	275	...	1	1	277	...	...	...	...	26	24	19	26	28	24	19	16	30	21	18	26
...	...	...	213	...	1	2	216	...	...	...	...	19	20	25	19	17	8	17	21	20	15	17	18
...	...	...	275	...	1	1	277	...	...	...	...	26	24	19	26	28	24	19	16	30	21	18	26
...	...	...	213	...	1	2	216	...	...	...	...	19	20	25	19	17	8	17	21	20	15	17	18
...	...	...	17	...	...	...	17	...	...	...	...	6	2	1	...	...	2	2	...	1	...	1	2
...	...	...	20	...	...	...	20	...	...	...	...	3	...	2	1	2	1	3	1	1	3	2	1
...	...	...	119	...	1	1	121	...	...	...	...	10	9	9	14	13	14	5	9	10	9	9	10
...	...	...	78	...	...	1	79	...	...	...	...	6	9	10	5	3	3	6	10	6	5	9	7
...	...	...	139	...	...	...	139	...	...	...	...	10	13	9	12	15	8	12	7	19	12	8	14
...	...	...	115	...	1	1	117	...	...	...	...	10	11	13	13	12	4	8	10	13	7	6	10
...	...	...	1668	...	3	15	1686	...	...	...	...	155	161	152	157	128	104	149	128	148	140	128	136
...	...	...	1213	...	2	7	1222	...	...	...	...	107	81	120	103	103	91	101	121	108	99	88	100
...	...	...	599	...	2	12	613	...	...	...	...	46	56	43	46	42	40	54	62	75	59	37	53
...	...	...	411	...	2	3	416	...	...	...	...	40	31	33	32	31	28	34	40	53	38	25	31
...	...	...	935	...	1	2	938	...	...	...	...	100	86	89	94	76	55	83	60	66	72	82	75
...	...	...	689	...	...	3	692	...	...	...	...	58	37	74	60	62	58	61	65	47	51	56	63
...	...	...	792	...	1	2	795	...	...	...	...	83	66	78	78	64	46	70	59	60	64	67	60
...	...	...	609	...	...	3	612	...	...	...	...	47	35	62	52	56	52	57	59	43	47	47	55
...	...	...	143	...	...	...	143	...	...	...	...	17	20	11	16	12	9	13	1	6	8	15	15
...	...	...	80	...	...	...	80	...	...	...	...	11	2	12	8	6	6	4	6	4	4	9	8
...	...	...	131	...	...	...	131	...	...	...	...	9	19	20	16	10	8	12	6	6	9	8	8
...	...	...	113	...	...	...	113	...	...	...	...	8	13	13	11	10	5	6	16	8	10	7	6
...	...	...	3	...	...	1	4	...	...	...	...	...	...	...	1	...	1	...	...	1	...	1	...
...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
88	9	..	315	245	47	25	77	268	279	...	8	89	71	48	38	53	42	38	42	41	63	48	59
161	9	..	381	307	60	24	67	142	561	...	2	105	93	67	68	57	49	48	53	49	58	60	65
13	1	9	977	282	166	75	796	561	124	1	18	108	89	103	99	120	145	256	148	119	109	102	102
22	1	..	393	110	28	12	257	156	129	...	1	37	35	34	38	54	43	100	56	31	46	36	33
...	...	...	5	...	3	...	2	5	1	...	...	...	...	2	1	1	1	...	2	...	...	...	1
...	...	...	7	3	...	...	3	3	4	...	...	1	1	...	2	1	1	1	1	...	2	...	...
...	...	...	5	1	1	...	3	2	2	...	...	...	...	...	...	...	...	...	1	3	1	...	2
...	...	...	2	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																	
		Total.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
167. Suicide by poisonous gas	M	3													2	1			
	F	3													2		1		
168. Suicide by hanging or strangulation	M	35								3	1	1	1	8	9	5	2	3	1
	F	6											1		3	2			
169. Suicide by drowning	M	7												1	3	1		2	
	F	9										2		1	1	3	2		
170. Suicide by firearms	M	33											4	7	9	7	5	1	
	F	5										1	1	1	1	1			
171. Suicide by cutting or piercing instruments	M	14												4	2	6	1	1	
	F	2												1	1				
172. Suicide by jumping from high places	M	3													2	1			
	F	1														1			
174. Other suicides	M	9										1		2	2	2	2		
	F	2										1				1			
175. Poisoning by food	M	6	2				1	3	1	1					1				
	F	5	1		1	1		3					1	1					
177. Other acute accidental poisonings (gas excepted)	M	37	1	5	1	1	1	9	1			1	2	8	10	3	2	1	
	F	28	1	5	3	2	1	12			1	1	2	6	1	3	1	1	
178. Conflagration	M	20	1	1	2	2		6	5	1			1	4	1			1	1
	F	15	3				2	5	2	1	1			1	1			3	1
179. Accidental burns (conflagration excepted)	M	47	6	6	6	7	4	29	2		2	1		6	1		1	3	2
	F	61	4	8	5	4	6	27	6	4	1	2	2	4	3	3	6	3	
180. Accidental mechanical suffocation	M	18	10					10	1				1	2	1	1	1		1
	F	11	10	1				11											
181. Accidental absorption of irrespirable or poisonous gas	M	21	2			1		3					1	3	5	5	1	3	
	F	15	1					2	2	1		1		2		2	1	3	1
182. Accidental drowning	M	297	2	5	7	3	6	23	41	21	49	44	26	37	22	18	7	3	1
	F	61	2	4	1	2	4	13	9	6	13	4	1	7	4	3	1		
183. Accidental injury by firearms (wounds of war excepted)	M	58		1				1	3	8	12	4	4	8	6	6	3	2	
	F	7				1		1			2	1	1	2					
184. Accidental injury by cutting or piercing instruments	M	10				2		2					1	5	1			1	
	F	1					1	1											
185. Accidental injury by fall	M	78	1	1				2	1	1	1	2	5	11	5	11	7	17	12
	F	50	1	1				2	1		1	1	1	1		5	7	11	15
186. Accidental injury in mines and quarries	M	9										4	2	3					
187. Accidental injury by machines	M	26		1				1			1	3	2	1	7	3	3	3	1
	F	1																1	
188. Accidental injury by other crushing (vehicles, railways, landslides, etc.)**	M	298		2	1	5	7	15	19	9	25	22	29	50	43	34	20	22	10
	F	46		2		2	3	7	7	2	1	4	2	3	4	3	7	5	1
188A. Railroad accidents	M	109		2	1	1		4	1		6	9	12	19	25	9	10	9	5
	F	8				1	1	2			1	1			1	2		1	
188B. Street car accidents	M	10							2				1	2		1	1	2	1
	F	4		1				1						1	1		1		
188C. Automobile accidents	M	81				3	6	9	13	7	6	6	6	10	6	10	4	4	
	F	27		1		1	2	4	6	1		2	2	1	2	1	6	2	
188D. Aeroplane and balloon accidents	M	4											2	2					
188E. Landslide and snowslide accidents	M	1												1					
188F. Other crushing accidents	M	93				1	1	2	3	2	13	7	8	16	12	14	5	7	4
	F	7							1	1		1		1				2	1
189. Injury by animals (poisoning excepted)	M	23			1	1		2	2			1		2	2	1	7	3	2
	F	2							1								1		

AGES AND MONTHS IN ONTARIO, 1921.—Continued.

90 to 99 years.	100 years and over.	Not stated.	NATIVITY: Canada.	British.	Foreign.	Not stated.	SOCIAL CONDITION: Single.	Married.	Widowed.	Divorced.	Not stated.	MONTHS: January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	1	1	1	...	...	2	1	...	...	...	...	...	1	1	...	1	...	...	...	...	...
...	...	...	2	...	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
...	...	1	24	8	...	3	18	15	2	...	...	5	2	5	5	2	1	5	2	...	5	...	3
...	...	...	6	...	...	...	1	5	...	...	...	...	1	...	...	...	2	...	1	...	...	1	1
...	...	...	5	1	1	...	3	4	...	...	...	...	...	1	...	1	...	2	...	2	1	...	...
...	...	...	3	3	3	...	2	6	1	...	...	...	...	...	...	3	...	1	1	1	1	...	2
...	...	...	18	1	14	...	10	18	4	...	1	2	1	4	3	1	4	1	2	...	6	5	4
...	...	...	4	...	...	1	1	4	...	...	...	...	...	1	1	...	...	...	1	...	2	...	...
...	...	...	6	8	...	...	6	5	3	...	...	...	2	2	...	1	1	2	1	2	2	1	...
...	...	...	1	1	...	...	...	2	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
...	...	...	2	...	1	...	3	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1
...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
...	...	...	6	2	1	...	3	6	...	...	...	...	...	...	1	1	1	3	...	...	...	3	...
...	...	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...
...	...	...	4	...	2	...	5	1	...	...	...	...	...	...	...	1	...	1	2	1	...	1	...
...	...	...	5	...	...	...	4	1	...	...	...	...	...	...	1	1	...	3	...	...	...	...	...
...	...	...	24	5	4	4	21	15	1	...	...	2	2	2	6	4	4	4	3	3	2	2	3
...	...	...	21	4	3	...	17	10	1	...	...	3	4	...	2	3	4	2	2	5	3	...	...
...	...	...	18	2	...	...	14	5	1	...	...	7	...	2	...	...	1	...	1	2	1	6	...
...	...	...	14	1	...	...	11	3	1	...	...	2	3	3	...	1	3	...	...	...	...	3	...
...	...	...	40	4	3	...	38	6	3	...	...	3	3	3	1	4	2	4	4	3	4	7	9
...	...	...	52	7	1	1	42	12	7	...	...	7	5	5	8	8	...	6	2	4	7	5	4
..	...	...	11	6	1	...	12	4	2	...	...	...	...	...	...	2	...	1	1	3	1	2	8
...	...	...	11	...	...	...	11	...	...	...	...	3	1	...	1	...	...	...	1	1	2	1	1
...	...	...	10	9	...	2	9	9	3	...	...	4	1	2	...	3	1	2	1	1	2	4	...
...	...	...	10	2	3	...	9	3	3	...	...	7	...	2	...	3	...	...	1	...	...	2	...
...	...	5	204	42	29	22	229	53	8	...	7	9	5	11	20	36	53	81	41	20	8	5	8
...	...	...	48	6	5	2	49	12	...	...	...	2	3	4	3	9	6	18	14	1	1	...	...
...	...	1	38	7	11	2	36	18	2	...	2	9	1	5	2	4	4	2	5	4	10	8	4
...	...	...	6	1	...	...	3	4	...	...	...	...	1	1	1	...	1	1	...	...	1	...	1
...	...	...	4	3	2	1	8	2	...	...	...	3	...	1	2	...	1	1	1	1	...	...	...
...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
3	...	...	47	19	9	3	21	43	14	...	...	6	7	7	10	10	6	11	5	4	6	5	1
5	...	...	38	11	1	...	10	14	26	...	...	2	3	5	4	4	5	5	9	1	7	2	3
...	...	...	3	2	3	1	6	3	...	...	...	1	...	2	1	...	1	1	...	...	1	...	2
...	...	1	17	3	5	1	8	16	2	...	...	3	3	1	...	2	1	4	2	4	1	4	1
...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	198	54	28	18	144	124	24	1	5	32	28	21	20	23	25	24	24	32	25	22	22
...	...	...	32	10	4	...	22	19	5	...	...	3	1	...	1	7	3	4	8	3	11	2	3
...	...	...	67	24	10	8	40	51	13	1	4	16	10	10	7	8	8	12	12	9	7	5	5
...	...	...	5	3	...	...	3	5	...	...	...	1	...	...	...	2	2	...	...	...	3	...	...
...	...	...	4	4	2	...	3	5	2	...	...	...	1	1	...	1	3	1	...	...	...	...	3
...	...	...	4	...	...	...	1	3	...	...	...	...	1	...	...	1	...	...	1	...	1	...	...
...	...	...	60	14	6	1	52	27	2	...	...	3	3	...	5	8	12	6	10	14	9	6	5
...	...	...	20	5	2	...	14	8	5	...	...	1	...	...	1	2	1	4	7	3	5	1	2
...	...	...	2	1	...	1	1	3	...	...	...	...	...	1	2	...	...	...	...	...	...	1	...
...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
...	...	...	65	1	10	8	47	38	7	...	1	13	14	9	6	6	2	4	2	9	9	10	9
...	...	...	3	2	2	...	4	3	...	...	...	1	...	...	...	2	...	...	...	...	2	1	1
1	...	...	16	5	2	...	8	13	2	...	...	2	2	...	1	...	2	2	6	1	2	...	5
...	...	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1

CAUSES OF DEATH BY SEX,

CAUSES OF DEATH		AGES																
		Total.	Under 1 year	1 year.	2 years.	3 years.	4 years.	Total under 5 years.	5 to 9 years.	10 to 14 years.	15 to 19 years.	20 to 24 years.	25 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
192. Starvation (deprivation of food or water)	F	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
193. Excessive cold	M	3	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..
	F	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
194. Excessive heat	M	56	7	2	..	..	..	9	..	..	1	..	2	1	10	8	11	6	6
	F	43	6	..	..	..	..	6	..	..	..	2	..	2	1	2	2	11	16
195. Lightning	M	6	..	..	..	..	..	..	..	1	1	1	1	2	..	..	..	..	..
	F	2	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..
196. Electricity (lightning excepted)	M	33	..	..	..	..	..	..	1	..	4	6	7	9	2	4	..	..	..
	F	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..
197. Homicide by firearms	M	5	..	..	..	..	..	..	..	..	..	1	..	2	..	2	..	..	..
	F	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
198. Homicide by cutting or piercing instruments	M	2	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..
199. Homicide by other means	M	3	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..
	F	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
200. Infanticide (murder of infants less than one year of age)	M	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
201. Fracture (cause not specified)	M	180	..	1	3	..	1	5	13	5	7	10	16	22	15	16	23	19	20
	F	121	..	..	..	2	..	2	6	1	1	1	1	3	1	6	7	34	41
202. Other external violence (cause specified)	M	143	3	6	4	2	2	17	11	6	8	11	10	14	17	10	19	10	10
	F	26	1	..	3	..	1	5	2	4	1	2	..	1	..	3	2	3	3
203. Other external violence (cause not specified)	M	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
XV.—Ill-Defined Diseases.																			
**Total	M	315	84	10	2	4	2	102	4	1	3	3	4	16	23	49	64	25	9
**Total	F	256	68	18	3	2	1	92	2	4	3	6	6	14	19	20	54	19	11
204. Sudden death	M	38	5	..	1	..	..	6	..	..	..	..	1	1	2	7	12	7	1
	F	23	2	2	..	..	..	4	..	..	..	..	..	1	1	4	8	5	..
205. Cause of death not specified or ill-defined	M	277	79	10	1	4	2	96	4	1	3	3	3	15	21	42	52	18	8
	F	233	66	16	3	2	1	88	2	4	3	6	6	13	18	16	46	14	11

AGES AND MONTHS IN ONTARIO, 1921.—Concluded.

			NATIVITY				SOCIAL CONDITION					MONTHS											
90 to 99 years.	100 years and over.	Not stated.	Canada	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
...	...	...	2	...	1	...	2	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1
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7	1	1	108	41	23	8	68	85	27	...	...	15	16	19	11	6	7	21	20	17	19	16	13
16	1	..	66	45	3	7	37	28	5	...	1	4	8	9	13	11	9	14	8	8	8	17	12
...	...	...	103	25	10	5	65	66	11	...	1	3	13	11	11	11	17	18	17	12	10	10	10
...	...	...	22	2	1	1	14	4	8	...	...	2	1	2	1	4	3	2	4	5	....	2	....
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3	..	9	223	50	17	25	153	140	20	...	2	27	25	31	30	28	25	23	28	9	25	29	35
3	..	3	202	29	15	10	135	74	46	...	1	33	23	12	17	25	17	20	25	28	15	16	25
1	..	..	22	11	3	2	12	20	6	...	...	....	....	4	8	2	2	2	5	4	4	3	7
...	...	..	20	....	1	2	8	10	5	...	...	....	....	2	....	1	6	1	3	4	2	3	1
2	..	9	201	39	14	23	141	120	14	...	2	27	25	27	22	26	23	21	23	8	21	26	28
3	..	3	182	29	14	8	127	64	41	...	1	33	23	10	17	24	11	19	22	24	13	13	24

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.

Year	Typhoid Fever	Ratio per 100,000 of population	Smallpox	Ratio per 100,000 of population	Measles	Ratio per 100,000 of population	Scarlet Fever	Ratio per 100,000 of population	Whooping Cough	Ratio per 100,000 of population	Diphtheria	Ratio per 100,000 of population	Influenza	Ratio per 100,000 of population	Dysentery	Ratio per 100,000 of population
1902	392	17.7	7	.31	143	6.4	346	15.6	204	9.2	676	30.5	152	6.8	34	1.5
1903	391	17.3	21	.93	55	2.4	580	25.7	204	9.0	687	30.5	259	11.5	59	2.6
1904	482	21.0	3	.13	30	1.3	163	7.1	109	4.7	608	26.6	331	14.4	42	1.8
1905	446	19.2	3	.12	63	2.7	72	3.1	181	7.8	503	21.6	182	7.8	34	1.4
1906	891	37.8	4	.16	128	5.4	64	2.7	240	10.2	423	17.5	150	6.3	120	5.1
1907	520	21.8	4	.16	166	6.9	102	4.2	214	8.9	380	15.9	335	14.0	120	5.0
1908	662	27.3	2	.08	38	1.5	163	6.7	246	10.1	450	18.5	292	12.0	112	4.6
1909	669	27.2	3	.12	167	6.8	200	8.1	262	10.6	430	17.5	295	12.0	76	3.0
1910	706	28.4	2	.08	304	12.2	237	9.5	186	7.4	435	17.4	286	11.4	88	3.5
1911	637	25.2	3	.11	169	6.7	290	11.5	169	6.7	423	16.7	407	16.1	87	3.4
1912	483	18.8	2	.07	111	4.3	152	5.9	419	16.3	371	14.4	222	8.6	88	3.4
1913	446	17.1	2	.07	166	6.3	137	5.2	272	10.4	339	13.0	249	9.6	84	3.2
1914	358	13.5	1	.03	61	2.3	111	4.2	196	7.4	443	16.7	128	4.9	79	2.9
1915	298	11.1	2	.07	145	5.4	42	1.5	193	7.2	341	12.6	267	10.0	44	1.6
1916	335	12.3	5	.18	411	15.0	49	1.8	341	12.5	461	16.5	495	18.1	43	1.5
1917	252	9.1	1	.03	58	2.0	59	2.1	228	8.2	396	14.3	221	8.4	22	7.9
1918	208	7.4	2	.07	95	3.3	84	2.9	308	10.9	335	11.9	7,337	261.3	40	1.4
1919	145	5.0	5	.10	32	1.1	96	3.4	164	5.4	475	16.5	2,522	88.5	32	1.1
1920	203	7.0	33	1.1	303	10.4	170	6.0	376	13.0	745	25.7	3,276	113.4	33	1.1
1921	213	7.2	24	.81	54	1.8	144	4.9	310	10.5	653	22.2	509	17.3	158	5.3

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Tuberculosis, all forms	Ratio per 100,000 of population	Tuberculosis of Lungs	Ratio per 100,000 of population	Tuberculosis of Other Organs	Ratio per 100,000 of population	Acute Miliary Tuberculosis	Ratio per 100,000 of population	Potts Disease	Ratio per 100,000 of population	Tubercular Meningitis	Ratio per 100,000 of population	Disseminated Tuberculosis	Ratio per 100,000 of population	Abdominal Tuberculosis	Ratio per 100,000 of population	White Swelling	Ratio per 100,000 of population
1902	2,694	121.5	.....	.....	.....	.....	.....	.....	5	.22	.....	.....	.....	.....	.....	.....	.....	.....
1903	2,723	120.9	.....	.....	.....	.....	.....	.....	30	1.4	.....	.....	.....	.....	.....	.....	.....	.....
1904	2,877	125.5	.....	.....	.....	.....	.....	.....	2	.08	.....	.....	.....	.....	.....	.....	.....	.....
1905	2,667	115.0	.....	.....	.....	.....	.....	.....	7	.30	.....	.....	.....	.....	.....	.....	.....	.....
1906	2,911	123.7	.....	.....	.....	.....	.....	.....	4	.17	.....	.....	.....	.....	.....	.....	.....	.....
1907	2,530	105.9	1,313	55.0	1,033	44.1	.....	.....	11	.46	136	5.69	.....	.....	24	1.0	13	.54
1908	2,511	103.7	2,129	87.9	179	7.39	.....	.....	8	.33	115	4.74	.....	.....	77	3.18	3	.12
1909	2,380	96.9	2,017	82.1	88	3.58	32	1.30	11	.44	114	4.64	9	.36	106	4.31	3	.12
1910	2,291	92.0	2,013	80.8	67	2.69	32	1.28	11	.44	84	3.37	5	.20	65	2.61	14	.56
1911	2,353	93.2	2,035	80.6	69	2.38	35	1.38	9	.35	100	3.96	6	.23	99	3.92	.....	.....
1912	2,250	87.7	1,921	74.9	66	2.57	28	1.0	12	.46	127	4.95	7	.27	82	3.19	7	.27
1913	2,294	88.0	1,955	75.0	55	2.11	36	1.0	11	.42	132	5.06	10	.30	93	3.57	2	.07
1914	2,340	88.4	1,982	74.9	37	1.39	40	1.5	10	.37	149	5.25	7	.26	105	3.96	10	.37
1915	2,460	91.5	2,088	77.7	47	1.74	70	2.6	19	.70	135	5.02	8	.29	88	3.27	11	.40
1916	2,559	93.7	2,148	79.9	33	1.20	60	2.1	23	.84	187	6.85	5	.18	94	3.44	9	.32
1917	2,460	88.8	2,014	72.6	36	1.30	117	4.2	20	.72	163	5.88	7	.25	87	3.14	16	.57
1918	2,517	89.5	2,129	75.0	29	1.03	95	3.3	21	.74	138	4.55	5	.17	88	3.13	14	.49
1919	2,215	77.6	1,908	66.9	31	1.08	41	1.4	17	.59	132	4.62	10	.35	74	2.59	2	.07
1920	2,280	78.8	1,941	67.0	38	1.31	45	1.5	20	.69	125	4.32	10	.34	91	3.14	10	.34
1921	2,083	70.8	1,731	59.0	41	1.39	.....	.....	35	1.1	119	4.06	58	1.9	85	2.90	14	47

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Cancer, All forms	Ratio per 100,000 of population	Cancer of Organs not specified	Ratio per 100,000 of population	Cancer of Stomach and Liver	Ratio per 100,000 of population	Cancer, Female Genital Organs	Ratio per 100,000 of population	Cancer, Peritoneum, Intestines	Ratio per 100,000 of population	Cancer of Breast	Ratio per 100,000 of population	Cancer of Buccal Cavity	Ratio per 100,000 of population	Cancer of Skin	Ratio per 100,000 of population
1902	1,048	47.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903	1,156	51.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904	1,253	54.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1905	1,224	52.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1906	1,411	60.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1907	1,329	55.7	694	24.4	420	17.5	42	1.7	54	2.2	58	2.4	21	.87	40	1.6
1908	1,348	55.7	572	22.7	419	17.3	113	4.6	106	4.3	82	3.3	24	.99	32	1.3
1909	1,597	65.0	535	21.3	479	19.5	148	6.0	205	8.3	106	4.3	115	4.68	9	.36
1910	1,587	63.8	510	20.4	529	21.2	142	5.7	176	7.0	120	4.8	87	3.49	23	.92
1911	1,602	63.5	474	18.7	452	17.9	152	6.0	225	8.9	121	4.7	172	6.82	6	.23
1912	1,778	69.4	514	20.0	570	22.7	159	6.2	258	10.0	116	4.5	150	5.84	11	.42
1913	1,806	69.3	489	18.7	631	24.2	177	6.7	263	10.0	126	4.8	94	3.60	26	.90
1914	1,872	70.8	565	21.3	628	23.7	144	5.4	271	10.2	126	4.7	113	4.27	25	.94
1915	1,982	73.8	677	25.1	665	24.7	131	4.8	258	9.6	106	3.9	114	4.24	31	1.1
1916	2,012	73.8	691	25.3	659	24.1	149	5.4	258	9.4	136	4.9	73	2.67	46	1.6
1917	2,196	79.3	771	27.8	701	25.3	154	5.5	283	10.2	121	4.3	97	3.50	69	2.4
1918	2,103	74.9	750	26.6	647	22.6	148	5.2	281	10.0	129	4.5	77	2.74	71	2.5
1919	2,182	76.6	805	28.2	623	21.8	181	6.3	305	10.6	128	4.5	82	2.87	58	2.0
1920	2,464	85.3	688	23.4	782	27.0	234	8.0	396	13.6	198	6.8	117	4.04	49	1.7
1921	2,585	88.1	699	23 8	860	29.3	236	8.0	391	13.3	235	8.0	98	3.35	66	2.2

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Syphilis	Ratio per 100,000 of population	Pyaemia and Septicaemia	Ratio per 100,000 of population	Erysipelas	Ratio per 100,000 of population	Tetanus	Ratio per 100,000 of population	Rheumatism	Ratio per 100,000 of population	Diabetes	Ratio per 100,000 of population	Anaemia	Ratio per 100,000 of population	Alcoholism, Acute and Chronic	Ratio per 100,000 of population
1902	6	.2	238	10.7	74	3.3	13	.58	172	7.7	190	8.5	.....	.....	24	1.0
1903	10	.4	271	12.0	77	3.4	18	.79	171	7.5	195	8.6	.....	.....	24	1.0
1904	5	.2	245	10.7	86	3.7	9	.39	182	7.9	184	8.0	.....	.....	28	1.2
1905	5	.2	188	8.1	56	2.4	20	.86	148	6.3	220	9.4	.....	.....	38	1.6
1906	27	1.1	202	8.5	55	2.3	22	.92	130	5.0	221	9.3	323	13.7	42	1.7
1907	19	.7	210	8.7	87	3.6	18	.75	173	7.2	223	9.3	436	18.2	55	2.3
1908	20	.8	157	6.4	67	2.7	26	1.0	235	9.7	219	9.0	356	14.6	71	2.9
1909	23	.9	90	3.6	62	2.5	17	.69	281	11.4	231	9.4	388	15.8	83	3.3
1910	23	.9	133	5.3	89	3.5	11	.44	286	11.4	222	8.9	327	13.1	69	2.3
1911	15	.5	141	5.5	106	4.2	22	.87	311	12.3	283	11.2	435	17.2	98	3.8
1912	27	1.0	123	4.7	80	3.1	16	.62	276	10.7	269	10.4	450	17.5	149	5.8
1913	46	1.7	166	6.3	104	3.9	29	1.1	250	9.5	280	10.7	469	18.0	118	4.5
1914	38	1.4	180	6.8	92	3.4	25	.94	214	8.0	283	10.6	456	17.2	89	3.3
1915	48	1.7	173	6.4	82	3.0	15	.55	211	7.8	320	11.9	483	17.9	67	2.4
1916	67	2.4	184	6.7	70	2.5	23	.84	229	8.3	294	10.7	534	19.5	56	2.0
1917	85	3.0	156	5.6	102	3.6	11	.39	212	7.6	317	11.4	477	17.2	55	1.9
1918	91	3.2	161	5.7	71	2.5	22	.78	197	7.0	359	12.4	514	18.2	40	1.4
1919	66	2.3	170	5.9	63	2.2	20	.70	149	5.2	308	10.8	423	14.4	40	1.4
1920	93	3.2	190	6.5	126	4.3	12	.41	288	9.9	333	11.5	511	17.6	63	2.1
1921	97	3.3	177	6.0	91	3.1	24	.81	287	9.7	334	11.4	511	17.1	40	1.3

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Encephalitis	Ratio per 100,000 of population	Meningitis	Ratio per 100,000 of population	Apoplexy	Ratio per 100,000 of population	Paralysis without specified cause	Ratio per 100,000 of population	Convulsions of Infants	Ratio per 100,000 of population	Softening of the Brain	Ratio per 100,000 of population	Other Nervous Diseases	Ratio per 100,000 of population
1902	163	7.3	491	22.1	178	8.0	727	32.7	582	26.2	93	4.2	112	5.0
1903	99	4.3	422	18.7	899	39.9	796	35.3	432	19.1	77	3.4	236	10.4
1904	166	7.2	529	23.1	971	42.4	999	43.7	518	22.6	99	4.3	199	8.2
1905	67	2.8	577	24.8	929	40.0	951	41.0	429	18.4	69	2.9	218	9.4
1906	62	2.6	503	21.3	1,017	41.5	888	37.7	392	16.6	53	2.2	354	15.0
1907	70	2.9	539	22.5	1,044	43.7	1,021	42.7	497	20.8	51	2.1	170	7.1
1908	44	1.8	446	18.4	965	39.8	709	29.2	516	21.2	44	1.8	154	6.3
1909	24	.9	334	13.6	934	38.0	508	20.2	340	13.8	49	1.5	88	3.5
1910	12	.4	353	13.1	923	37.0	505	20.2	298	11.5	46	1.8	84	3.3
1911	14	.5	378	14.9	1,015	40.2	538	21.3	376	14.8	40	1.5	117	4.6
1912	13	.5	349	13.6	1,029	40.1	549	21.4	402	15.6	34	1.3	137	5.3
1913	50	1.9	426	13.3	1,199	46.0	556	21.3	417	15.9	34	1.3	125	4.7
1914	29	1.0	426	16.1	1,306	49.3	558	21.0	495	18.7	47	1.7	125	4.7
1915	37	1.3	390	14.5	1,418	52.4	527	19.6	452	16.8	60	2.2	126	4.7
1916	56	2.0	421	15.4	1,485	54.4	598	21.9	492	18.0	46	1.6	136	4.9
1917	48	1.7	320	11.5	1,450	52.3	529	19.1	379	13.6	46	1.6	123	4.4
1918	50	1.7	299	10.6	1,491	53.0	563	20.0	262	9.4	37	1.3	129	4.5
1919	63	2.2	265	9.6	1,554	54.5	488	17.1	341	11.9	33	1.1	122	4.2
1920	110	3.8	250	8.6	1,394	48.2	409	14.1	297	10.2	35	1.2	158	5.4
1921	65	2.2	237	8.1	1,496	51.0	347	11.5	202	6.8	31	1.0	138	4.7

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Acute Endocarditis	Ratio per 100,000 of population	Angina Pectoris	Ratio per 100,000 of population	Organic Heart Disease	Ratio per 100,000 of population	Diseases of the Arteries	Ratio per 100,000 of population	Malformations	Ratio per 1,000 live births	Congenital Debility, etc.	Ratio per 1,000 live births	Diseases of Early Infancy	Ratio per 1,000 of live births
1902	108	4.8	86	3.8	1,685	71.4	71	3.2	.....	.....	.....	.....	.....	.....
1903	97	4.3	57	2.5	1,993	88.0	90	3.9	.....	.....	.....	.....	.....	.....
1904	95	4.1	66	2.8	1,784	78.7	153	6.6	.....	.....	.....	.....	.....	.....
1905	122	5.2	64	2.7	1,734	74.7	135	5.8	.....	.....	.....	.....	.....	.....
1906	127	5.3	64	2.7	1,687	71.6	174	7.4	.....	.....	.....	.....	.....	.....
1907	266	11.1	76	3.1	1,864	78 0	270	11.3	88	1.68	.....	.....	.....	.....
1908	200	8.2	74	3.0	1,698	70.1	381	15.7	158	2.8	.....	.....	.....	.....
1909	182	7.4	71	2.8	1,864	75.9	718	28.8	307	5.6	2,582	47.4	456	8.3
1910	210	8.4	67	2.6	1,945	78.1	771	30.9	245	4.4	2,255	40.4	200	3.5
1911	214	8.4	64	2.5	2,140	84.4	985	39.2	204	3.6	2,758	49.1	82	1.4
1912	163	6.3	88	3.4	2,462	96.0	1,142	44.5	217	3.69	3,101	52.6	134	2.2
1913	84	3.2	108	4.1	2,621	100.6	1,116	42.6	140	2.17	3,545	54.9	54	.83
1914	44	1.6	98	3.6	2,805	106.0	1,093	41.3	176	2.66	3,452	52.1	57	.86
1915	87	3.2	139	5.1	2,835	105.5	1,242	46.2	173	2.57	3,241	48.3	150	2.2
1916	111	4.0	135	4.0	3,075	112.7	1,204	44.1	236	3.62	3,104	47.5	134	2.05
1917	160	5.7	173	6.2	3,222	116.3	1,298	46.8	226	3.61	2,918	46.5	130	2.07
1918	127	4.5	161	5.7	3,321	118.1	1,461	51.9	230	3.55	3,087	47.6	100	1.7
1919	193	6.7	164	5.7	2,864	100.4	1,297	45.4	286	4.56	2,652	42.2	176	2.8
1920	189	6.2	187	6.4	3,173	109.7	1,878	64.9	548	7.56	3,083	42.5	339	4.6
1921	351	12.1	210	7.1	3,396	115.7	1,824	62.2	493	6.65	2,659	35.9	249	3.4

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Acute Bronchitis	Ratio per 100,000 of population	Chronic Bronchitis	Ratio per 100,000 of population	Broncho-Pneumonia	Ratio per 100,000 of population	Pneumonia	Ratio per 100,000 of population	Pleurisy	Ratio per 100,000 of population	Pulmonary Congestion and Apoplexy	Ratio per 100,000 of population	Asthma	Ratio per 100,000 of population
1902	333	15.0	232	10.4	287	12.9	1,837	82.8	129	5.8	173	7.8	109	4.9
1903	313	13.9	279	12.3	344	15.2	1,804	80.1	152	6.7	182	8.0	106	4.2
1904	547	23 9	118	5.1	366	16.0	1,738	76.0	158	6.9	235	10.2	79	3.4
1905	340	14.2	230	9.9	366	15.7	1,789	77.1	127	5.4	216	9.3	73	3.1
1906	304	12.8	195	8.2	313	13.3	2,108	89.6	98	4.1	146	6.2	108	4 6
1907	427	17.8	236	9.8	498	20.8	2,564	107.4	88	3.7	153	6.4	124	5.1
1908	312	12.8	216	8.9	397	16.3	1,786	73.3	101	4.1	97	4.0	107	4.4
1909	304	12.4	305	12.4	490	19.9	1,503	61.3	150	6.1	112	4.5	128	5.2
1910	271	10.8	299	12.0	464	18.6	1,558	62.6	155	6.2	69	2.7	154	6.1
1911	251	9.9	346	13.7	472	18.7	1,568	62.1	216	8.5	79	3.1	142	5.6
1912	220	8 5	369	14.3	480	18.7	1,629	63.5	183	7.1	84	3.2	112	4.3
1913	281	10.7	320	12.2	517	19.8	2,076	79.7	101	3.8	92	3.5	128	4.5
1914	225	8.5	307	11.6	493	18.6	2,009	75.5	109	4.1	109	4.1	111	4.1
1915	300	11.1	295	10.9	662	24.6	2,352	87.5	111	4.2	99	3.3	110	4.0
1916	275	10.0	315	11.5	887	32.5	2,912	106.8	125	4 5	143	5.2	139	5.0
1917	240	8.6	359	12.9	733	26.4	2,763	99.8	127	4.5	104	3.7	121	4.3
1918	241	8.5	276	9.8	994	35.3	4,660	166.3	128	4.5	99	3.5	145	5.1
1919	274	9.6	192	6.7	717	25.1	2,353	82.6	88	3.0	54	1.8	118	4.2
1920	285	9.8	291	10.0	986	34.0	2,152	74.5	129	4.4	79	2 7	172	5.9
1921	244	8.3	289	9.5	886	30.2	2,119	72.3	115	3.9	83	2.8	128	4.3

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	Diseases of Stomach	Ratio per 100,000 of population	Appendicitis	Ratio per 100,000 of population	Hernia, Intestinal Obstruction	Ratio per 100,000 of population	Diseases of Liver	Ratio per 100,000 of population	Bright's Disease	Ratio per 100,000 of population	Diseases of the Kidney	Ratio per 100,000 of population	Diseases of Bladder	Ratio per 100,000 of population
1902	225	10.1	204	9.2	205	9.2	295	13.3	499	22.5	200	9.0	97	4.3
1903	203	9.0	249	10.3	234	10.3	293	13.0	519	22.6	250	11.1	102	4.5
1904	277	12.1	268	11.7	174	7.6	262	11.4	523	22.4	188	8.2	107	4.6
1905	274	11.8	242	10.4	177	7.2	281	12.1	739	31.8	142	6.1	109	4.7
1906	282	11.9	257	10.9	253	10.7	284	12.0	855	36.3	151	6.4	131	5.5
1907	353	14.7	197	8.2	236	9.8	124	5.1	888	37.2	136	5.6	121	5.0
1908	447	18.4	215	8.8	223	9.2	125	5.1	786	32.4	110	4.5	125	5.1
1909	531	21.1	236	9.6	225	9.1	159	6.4	817	32.2	159	6.4	101	4.1
1910	744	29.8	236	9.4	226	9.0	112	4.5	775	31.1	70	2.8	82	3.2
1911	430	17.0	276	10.9	224	8.8	133	5.2	814	32.2	64	2.5	55	2.1
1912	323	12.5	260	10.1	239	9.3	120	4.6	848	33.0	76	2.9	41	1.5
1913	385	14.7	310	11.9	268	10.2	114	4.3	1,070	41.0	114	4.3	38	1.4
1914	271	10.2	283	10.6	248	9.3	157	5.5	1,022	46.1	73	2.7	27	1.0
1915	296	11.0	223	8.2	296	11.0	131	4.8	1,117	49.0	89	3.3	32	1.1
1916	248	9.0	240	8.7	310	11.3	149	5.5	1,027	37.6	93	3.4	36	1.3
1917	181	6.5	257	9.2	333	12.0	112	4.0	997	36.0	68	2.4	43	1.5
1918	210	7.4	266	9.4	296	10.5	136	4.9	1,071	38.1	80	2.8	45	1.6
1919	256	8.9	232	8.1	314	11.0	131	4 5	918	32.2	54	1.8	84	2.9
1920	226	7.8	369	12.7	277	9.5	93	3.2	979	33.8	60	2.0	104	3.5
1921	264	9.0	344	11.7	286	9.7	172	3.6	987	33.6	106	3.6	105	3 6

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Continued.

Year	All Puerperal Diseases	Ratio per 1,000 of live births	Other accidents of Pregnancy	Ratio per 1,000 live births	Puerperal Septicaemia	Ratio per 1,000 of live births	Puerperal Haemorrhage	Ratio per 1,000 live births	Puerperal Phlegmasia Alba Dolens	Ratio per 1,000 live births
1902	246	5.24	149	3.17	43	.91	.....	.....	.....	.....
1903	231	4.84	127	2.66	44	.92	.....	.....	.....	.....
1904	274	5.58	157	3.20	39	.79	.....	.....	.....	.....
1905	211	4.15	135	2.66	27	.53	.....	.....	.....	.....
1906	175	3.46	75	1.48	53	1.04	.....	.....	.....	.....
1907	233	4.48	153	2.93	48	.92	.....	.....	.....	.....
1908	277	5.05	138	2.52	98	1.79	.....	.....	.....	.....
1909	291	5.45	40	.74	82	1.53	27	.50	15	.28
1910	284	5.10	85	1.52	82	1.47	21	.39	8	.14
1911	355	6.34	63	1.12	121	2.16	28	.50	2	.03
1912	406	6.91	88	1.49	127	2.16	28	.47	11	.18
1913	351	5.44	59	.91	108	1.67	30	.46	9	.13
1914	339	5.12	49	.74	144	2.17	17	.26	2	.03
1915	324	4.83	48	.71	115	1.72	29	.43	3	.04
1916	328	5.03	50	.76	112	1.72	21	.32	10	.15
1917	328	5.24	59	.94	107	1.71	22	.35	2	.03
1918	298	4.60	43	.66	92	1.42	26	.42	2	.03
1919	284	4.53	55	.87	85	1.35	40	.64	5	.08
1920	489	6.75	76	1.04	156	2.15	45	.62	21	.29
1921	387	5.22	48	.64	75	1.01	47	.63	14	.19

Deaths and Death-Rates for all the Principal Causes for Twenty Years, 1902 to 1921.—Concluded.

Year	Old Age	Ratio per 100,000 of population	Burns and Scalds	Ratio per 100,000 of population	Accidental Drowning	Ratio per 100,000 of population	Fractures	Ratio per 100,000 of population	Suicides	Ratio per 100,000 of population
1902	3,667	165.4	77	3.4	223	10.0	367	16.5	115	5.1
1903	3,343	148.5	137	6.0	225	9.9	290	12.8	125	5.6
1904	3,711	162.4	94	4.1	219	9.5	142	6.2	106	4.6
1905	3,714	160.1	84	3.6	314	13.5	170	7.3	109	4.7
1906	3,063	130.1	120	5.1	298	12.6	212	9.0	123	5.2
1907	2,615	109.5	133	5.5	297	12.4	145	6.0	136	5.7
1908	2,433	100.4	117	4.8	325	13.4	102	4.2	105	4.3
1909	3,204	130.5	103	4.1	264	10.7	178	7.2	117	4.8
1910	3,329	133.7	112	4.5	266	10.6	219	8.7	91	3.6
1911	3,514	135.3	126	4.9	304	12.0	248	9.8	139	5.5
1912	3,646	141.8	131	5.1	276	10.7	261	10.1	147	5.7
1913	3,125	119.9	128	4.5	434	16.6	296	10.9	170	6.5
1914	2,787	105.3	176	6.6	347	13.1	265	10.0	152	5.7
1915	2,779	103.4	144	5.3	367	13.6	220	8.1	147	5.4
1916	2,655	97.3	246	9.0	324	11.8	211	7.7	140	5.1
1917	2,739	98.5	150	5.4	283	10.2	231	8.3	133	4.8
1918	2,554	90.8	179	6.3	275	9.7	224	7.9	106	3.7
1919	2,437	85.4	173	6.0	328	11.5	207	7.2	126	4.4
1920	2,731	94.4	200	6.9	299	10.3	261	9.0	148	5.1
1921	1,404	47.9	108	3.6	357	12.7	300	10.2	160	5.4

APPENDIX

BIRTHS BY MONTHS AND SEX IN ONTARIO (INCLUDING CITIES AND TOWNS), 1921.

Counties.	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins.	No. cases of triplets	Illegitimates.	Still-Births.
Grand Total, Prov		74,152	5,977	5,694	6,769	6,603	6,773	6,190	6,341	6,330	6,185	5,909	5,577	5,804	784	12	1,592	3,391
Total Counties, Cities, Towns,	M	38,307	3,083	2,928	3,498	3,431	3,467	3,201	3,305	3,302	3,211	3,058	2,878	2,946	813	25	796	1,998
Total Counties, Cities, Towns,	F	35,845	2,894	2,766	3,271	3,172	3,306	2,989	3,037	3,028	2,974	2,851	2,699	2,858	755	11	796	1,393
Total Counties only		37,016	2,939	2,727	3,407	3,410	3,399	3,037	3,142	3,243	3,136	2,991	2,742	2,843	422	10	466	1,531
Total	M	19,060	1,535	1,407	1,758	1,765	1,724	1,571	1,631	1,691	1,602	1,543	1,395	1,435	437	21	232	895
Total	F	17,956	1,404	1,320	1,649	1,645	1,675	1,463	1,511	15,52	1,534	1,448	1,347	1,408	407	9	234	636
Algoma	M	322	20	27	23	33	34	31	30	25	29	27	19	24	10	.....	5	10
	F	314	24	24	31	28	31	29	23	31	31	17	26	19	2	.....	5	15
		636	44	51	54	61	65	60	53	56	60	44	45	43	6	.....	10	25
Brant	M	221	17	23	19	15	30	18	12	15	18	21	19	14	2	.....	6	8
	F	198	16	15	26	16	14	17	20	24	12	15	11	12	6	.....	1	8
		419	33	38	45	31	44	35	32	39	30	36	30	26	4	.....	7	16
Bruce	M	474	44	42	42	48	53	32	42	27	43	32	38	31	10	.....	10	21
	F	442	37	31	41	44	35	32	38	38	35	41	38	32	12	.....	9	18
		916	81	73	83	92	88	64	80	65	78	73	76	63	11	.....	19	39
Carleton	M	422	34	31	43	32	47	35	37	32	37	29	32	33	18	.....	5	24
	F	357	29	28	26	29	38	30	29	22	30	25	35	36	8	.....	4	14
		779	63	59	69	61	85	65	66	54	67	54	67	69	13	.....	9	38

Dufferin	M	183	15	17	18	16	15	17	27	9	7	15	15	12	2	.....	4	7
	F	163	5	16	20	15	16	11	21	12	10	12	13	12	.....	.....	.....	8
		346	20	33	38	31	31	28	48	21	17	27	28	24	1	.....	4	15
Elgin	M	259	23	22	25	18	32	21	12	32	29	14	8	23	6	.....	2	12
	F	252	27	15	26	27	17	31	19	18	16	16	18	22	6	.....	3	9
		511	50	37	51	45	49	52	31	50	45	30	26	45	6	.....	5	21
Essex	M	772	62	70	62	62	62	58	66	71	60	69	67	63	11	.....	5	33
	F	711	58	51	60	55	67	51	56	57	57	70	64	65	15	.....	5	18
		1,483	120	121	122	117	129	109	122	128	117	139	131	128	13	.....	10	51
Frontenac	M	226	13	20	24	18	18	25	26	20	18	17	18	9	12	.....	7	12
	F	217	18	14	22	18	22	14	14	20	21	19	15	20	4	.....	4	7
		443	31	34	46	36	40	39	40	40	39	36	33	29	8	.....	11	19
Grey	M	486	33	40	46	46	47	29	51	54	46	40	25	29	6	.....	7	20
	F	472	37	27	49	22	38	40	55	41	43	43	39	38	8	.....	8	15
		958	70	67	95	68	85	69	106	95	89	83	64	67	7	.....	15	35
Haldimand	M	207	20	14	17	22	24	22	13	21	17	12	12	13	5	.....	3	2
	F	208	18	13	14	22	12	21	15	22	21	20	12	18	3	.....	4	7
		415	38	27	31	44	36	43	28	43	38	32	24	31	4	.....	7	9
Haliburton	M	85	6	6	9	12	13	8	5	5	4	4	5	8	1	.....	6	1
	F	85	4	4	8	14	10	7	14	3	6	7	2	6	1	.....	.....	.....
		170	10	10	17	26	23	15	19	8	10	11	7	14	1	.....	6	1
Halton	M	266	22	17	43	23	21	23	15	22	24	14	25	17	.....	.....	1	15
	F	250	26	12	23	20	27	17	19	22	16	31	19	18	4	.....	5	13
		516	48	29	66	43	48	40	34	44	40	45	44	35	2	.....	6	28

BIRTHS BY MONTHS AND SEX IN ONTARIO, 1921—*Continued.*

Counties.	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins.	No. cases of triplets.	Illegiti-mates.	Still-Births.
Hastings	M	553	42	50	42	52	48	38	48	49	48	53	45	32	19	.....	6	30
	F	493	32	38	32	59	50	44	44	37	50	38	33	36	9	.....	13	17
		1,046	74	94	74	111	98	82	92	86	98	91	78	68	14	.....	19	47
Huron	M	481	37	35	35	54	50	39	40	47	46	36	32	30	12	.....	6	30
	F	452	34	34	29	47	42	35	38	41	39	43	32	38	8	.....	6	17
		933	71	69	64	101	92	74	78	88	85	79	64	68	10	.....	12	47
Kenora	M	133	12	12	20	16	15	10	5	13	6	5	13	6	.....	.....	2	9
	F	120	12	7	21	14	15	9	6	5	9	5	10	7	2	.....	2	3
		253	24	19	41	30	30	19	11	18	15	10	23	13	1	.....	4	12
Kent	M	569	50	39	63	58	37	43	50	50	42	53	43	41	12	.....	4	20
	F	575	44	42	51	64	52	33	54	47	58	43	41	40	14	.....	6	13
		1,144	94	81	114	122	89	76	104	97	100	96	84	87	13	.....	10	33
Lambton	M	405	27	36	36	43	44	35	41	25	38	22	32	24	3	.....	1	25
	F	384	35	27	40	31	29	30	31	34	40	22	38	27	7	.....	6	19
		787	62	63	76	74	73	65	72	59	78	44	70	51	5	.....	7	44
Lanark	M	274	27	23	32	25	23	18	24	20	22	18	17	19	5	.....	3	18
	F	245	18	27	24	17	27	18	23	22	27	16	10	16	3	.....	5	6
		519	45	50	56	42	50	36	47	48	49	34	27	35	4	.....	8	24

Leeds & Grenville	M	421	34	24	50	45	32	40	35	31	31	39	30	30	9	3	7	18
	F	379	22	33	30	46	33	32	38	32	29	27	28	29	9	.....	4	18
		800	56	57	80	91	65	72	73	63	60	66	58	59	9	1	11	36
Lennox&Add'ton	M	180	16	8	13	21	16	20	18	23	9	16	9	11	3	.....	1	9
	F	210	23	15	16	25	19	15	14	20	16	12	12	23	7	.....	3	6
		390	39	23	29	46	35	35	32	43	25	28	21	34	5	.....	4	15
Lincoln	M	271	22	18	15	27	17	20	30	33	25	23	20	21	10	.....	2	15
	F	246	20	11	23	22	24	22	25	24	13	24	12	26	8	.....	1	6
		517	42	29	38	49	41	42	55	57	38	47	32	47	9	...	3	21
Manitoulin	M	137	4	10	23	6	11	11	8	7	19	11	12	12	2	...	6	6
	F	134	10	8	19	13	9	7	15	14	10	12	6	11	4	.	5	5
		271	14	18	42	19	20	18	23	21	29	26	18	23	3	...	11	11
Middlesex	M	434	29	38	49	33	43	40	33	27	42	39	28	33	9	.....	2	19
	F	408	42	27	36	35	44	36	27	40	35	29	35	22	13	....	5	12
		842	71	65	85	68	87	76	60	67	77	68	63	55	11	.....	7	31
Muskoka	M	239	19	11	16	28	26	18	29	14	16	23	23	16	5	.....	3	15
	F	233	21	17	27	21	14	20	15	22	20	14	20	22	9	.....	3	9
		472	40	28	43	49	40	38	44	36	36	37	43	38	7	.....	6	24
Nipissing	M	459	30	32	40	44	51	50	38	46	39	36	25	28	5	9	3	18
	F	422	28	32	28	43	61	38	45	26	24	46	19	33	13	.....	3	16
		881	58	63	68	87	112	88	83	72	63	82	44	61	9	3	6	34
Norfolk	M	299	23	34	22	23	33	26	18	32	20	28	19	21	12	.....	4	12
	F	265	18	24	20	26	29	28	18	13	21	18	22	28	10	3	3	11
		564	41	58	42	49	62	54	36	45	41	46	41	49	11	1	7	23

BIRTHS BY MONTHS AND SEX IN ONTARIO, 1921—*Continued.*

Counties.	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins.	No. cases of triplets.	Illegitimates.	Still-Births.
Northumberland & Durham	M	525	44	35	43	41	43	57	47	48	48	41	40	38	18	1	8	40
	F	526	41	46	51	47	52	43	52	44	43	37	35	35	14	2	8	22
		1,051	85	81	94	88	95	100	99	92	91	78	75	73	16	1	16	62
Ontario	M	358	33	12	34	50	40	28	16	36	29	24	27	29	12	.....	5	23
	F	322	26	19	38	23	27	24	33	23	23	30	25	31	12	.....	3	22
		680	59	31	72	73	67	52	49	59	52	54	52	60	12	.....	8	45
Oxford	M	307	24	22	23	28	31	34	25	15	33	24	22	26	9	.....	3	9
	F	305	22	26	20	34	23	30	28	22	31	26	21	22	9	.....	1	9
		612	46	48	43	62	54	64	53	37	64	50	43	48	9	.....	4	18
Parry Sound	M	383	34	28	31	37	31	29	42	28	32	25	36	30	5	.....	9	23
	F	391	32	27	39	44	32	32	28	35	37	23	33	29	11	.....	11	17
		774	66	55	70	81	63	61	70	63	69	48	69	59	8	.....	20	40
Peel	M	232	16	8	28	22	26	19	23	18	17	23	20	12	4	.....	1	6
	F	218	21	20	16	15	19	23	18	18	16	15	17	20	4	.....	3	6
		450	37	28	44	37	45	42	41	36	33	38	37	32	4	.....	4	12
	M	368	30	25	24	33	35	29	28	42	33	30	28	31	7	.....	4	16
	F	383	27	29	40	36	40	28	30	44	30	27	30	22	3	.....	2	12
		751	57	54	64	69	75	57	58	86	63	57	58	53	5	.....	6	28

Peterborough.....	M	218	19	16	12	22	15	19	17	27	18	19	9	25	7	.....	2	14
	F	228	18	21	18	23	22	17	16	17	20	20	16	20	11	.....	1	10
		446	37	37	30	45	37	36	33	44	38	39	25	45	9	.....	3	24
Prescott&Russell...	M	815	53	52	91	82	72	65	64	70	68	65	69	64	25	2	5	38
	F	685	62	54	64	57	63	56	56	54	52	60	48	59	11	1	.....	23
		1,500	115	106	155	139	135	121	120	124	120	124	117	123	18	1	5	61
Prince Edward....	M	175	12	11	15	16	20	14	20	14	10	23	9	11	3	.....	1	12
	F	158	12	10	13	10	16	11	11	21	12	17	13	12	1	.....	2	6
		333	24	21	28	26	36	25	31	35	22	40	22	23	2	.....	3	18
Rainy River.....	M	197	20	14	14	19	22	12	15	18	22	17	10	14	3	.....	2	4
	F	160	18	19	18	13	17	11	12	10	12	11	8	11	3	.....	4	3
		357	38	33	32	32	39	23	27	28	34	28	18	25	3	.....	6	7
Renfrew.....	M	601	61	37	52	57	55	44	54	52	55	42	40	52	20	.....	8	29
	F	575	39	40	58	78	50	43	36	45	48	51	44	43	20	.....	9	24
		1,176	100	77	110	135	105	87	90	97	103	93	84	95	20	.....	17	53
Simcoe.....	M	583	51	36	53	61	62	46	48	53	42	56	32	43	11	.....	5	41
	F	614	49	45	51	70	64	39	50	51	56	47	45	47	13	.....	11	17
		1,197	100	81	104	131	126	85	98	104	98	103	77	90	12	.....	16	58
Stormont, Dundas & Glengarry.....	M	650	55	53	72	58	49	37	61	56	58	52	40	59	16	.....	4	27
	F	641	44	46	84	63	57	47	55	59	53	41	52	40	12	....	9	25
		1,291	99	99	156	121	106	84	116	115	111	93	92	99	14	.....	13	52

BIRTHS BY MONTHS AND SEX IN ONTARIO.—*Continued.*

Counties	Sex	Total	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	No. pairs of twins.	No. cases of triplets	Illegitimates	Still-Births
Sudbury.....	M	483	49	43	51	40	37	36	49	43	36	33	35	31	5	1	5	20
	F	511	49	41	61	48	53	31	40	34	45	37	38	34	17	2	6	14
		994	98	84	112	88	90	67	89	77	81	70	73	65	11	2	11	34
Thunder Bay.....	M	98	8	4	9	9	10	9	4	11	4	9	10	10	3	.....	1	4
	F	93	5	5	6	6	8	12	14	11	9	6	6	5	1	.....	1	1
		190	13	9	15	15	18	21	18	22	13	15	16	15	2	.....	2	5
Timiskaming.....	M	880	71	71	84	72	62	80	82	77	72	65	75	69	25	.....	15	40
	F	784	53	72	59	61	79	64	57	73	72	62	63	69	17	.....	5	26
		1,664	124	143	143	133	141	144	139	150	144	127	138	138	21	.....	20	66
Victoria.....	M	230	18	17	19	27	22	18	20	24	21	15	13	16	3	.....	7	7
	F	178	18	10	18	15	17	22	17	11	20	6	11	13	7	.....	2	10
		408	36	27	37	42	39	40	37	35	41	21	24	29	5	.....	9	17
Waterloo.....	M	333	22	35	26	28	33	29	31	18	22	31	26	32	4	.....	2	6
	F	317	24	20	29	24	28	29	26	27	34	27	28	21	4	.....	6	8
		650	46	55	55	52	61	58	57	45	56	58	54	53	4	.....	8	14
Welland.....	M	491	41	40	50	34	29	41	42	53	42	42	29	48	6	.....	2	17
	F	542	41	40	41	39	46	49	43	54	49	51	50	39	8	.....	7	16
		1,033	82	80	91	73	75	90	85	107	91	93	79	87	7	.....	9	33

Wellington	M	408	26	17	35	42	28	38	28	44	41	31	44	34	8	.....	2	25
	F	369	23	35	25	21	36	33	35	40	30	33	23	35	8	.....	6	16
		777	49	52	60	63	64	71	63	84	71	64	67	69	8	.....	8	41
Wentworth	M	342	26	22	30	32	31	23	31	33	32	30	24	28	6	.....	5	13
	F	311	24	21	30	27	25	23	24	30	23	30	26	28	6	.....	4	6
		653	50	43	60	59	56	46	55	63	55	60	50	56	6	.....	9	19
York	M	1,608	141	104	135	135	129	140	131	155	132	147	126	133	48	2	25	72
	F	1,410	98	83	128	118	126	129	114	142	130	126	105	111	30	1	20	53
		3,018	239	187	263	253	255	269	245	297	262	273	231	244	39	1	45	125

BIRTHS BY MONTHS AND SEX—CITIES, 1921.

Cities.	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins.	No. cases of triplets.	Illegitimates.	Still-Births.
Grand Total		32,260	2,675	2,595	2,904	2,724	2,937	2,786	2,765	2,696	2,610	2,564	2,419	2,585	317	2	1,052	1,618
Total Males		16,687	1,386	1,319	1,510	1,423	1,501	1,437	1,438	1,408	1,392	1,313	1,255	1,305	332	4	523	958
Total Females		15,573	1,289	1,276	1,394	1,301	1,436	1,349	1,327	1,288	1,218	1,251	1,164	1,280	302	2	529	660
Belleville	M	178	11	16	19	20	15	9	14	18	14	13	17	12	8	.....	5	11
	F	187	11	18	18	16	17	14	17	19	17	15	14	11	6	.....	6	11
		365	22	34	37	36	32	23	31	37	31	28	31	23	7	.....	11	22
Brantford	M	449	40	39	36	39	41	37	27	35	43	34	34	44	8	.....	2	24
	F	409	36	37	36	32	43	33	40	30	29	26	34	33	10	.....	3	16
		858	76	76	72	71	84	70	67	65	72	60	68	77	9	.....	5	40
Chatham	M	210	18	28	13	14	17	19	13	19	12	21	21	15	4	.....	3	6
	F	181	14	16	9	10	21	19	14	20	16	16	11	15	.....	.....	1	10
		391	32	44	22	24	38	38	27	39	28	37	32	30	2	.....	4	16
Fort William	M	324	17	18	27	34	29	25	25	25	30	32	29	33	8	.....	3	22
	F	371	35	28	37	29	27	26	26	33	32	35	27	36	6	.....	4	7
		695	52	46	64	63	56	51	51	58	62	67	56	69	7	.....	7	29
Galt	M	182	11	15	17	18	15	12	15	18	10	28	8	15	6	.....	4	5
	F	177	15	14	9	16	20	25	11	17	9	12	13	16	2	.....	1	6
		359	26	29	26	34	35	37	26	35	19	40	21	31	4	.....	5	11

Guelph.....	M	218	15	21	25	21	26	16	13	25	14	18	15	9	12	3	5	12
	F	206	14	22	20	8	28	15	22	13	16	23	11	14	4	.....	1	4
		424	29	43	45	29	54	31	35	38	30	41	26	23	8	1	6	16
Hamilton.....	M	1,778	144	157	167	146	144	156	146	154	143	125	131	165	36	.....	44	111
	F	1,720	167	141	152	136	158	141	140	137	160	126	133	129	22	.....	61	69
		3,498	311	298	319	282	302	297	286	291	303	251	264	294	29	.....	105	180
Kingston.....	M	323	24	21	30	18	36	27	26	27	26	36	25	27	9	.....	16	22
	F	325	37	28	36	27	20	22	34	25	15	24	22	35	11	.....	15	17
		648	61	49	66	45	56	49	60	52	41	60	47	62	10	.....	31	39
Kitchener.....	M	317	26	23	27	24	37	28	22	15	34	30	29	22	3	.....	5	15
	F	294	21	21	34	31	24	30	19	29	18	27	17	23	7	.....	5	14
		611	47	44	61	55	61	58	41	44	52	57	46	45	5	.....	10	29
London.....	M	717	64	47	65	60	74	66	68	62	51	56	60	41	15	.....	25	40
	F	741	68	64	52	68	85	75	78	49	47	58	46	51	19	.....	29	35
		1,458	132	111	120	128	159	141	146	111	98	114	106	92	17	.....	54	75
Niagara Falls.....	M	242	23	17	25	14	21	22	26	18	21	18	18	19	5	.....	3	12
	F	205	15	10	14	19	26	16	22	24	11	21	13	14	1	.....	1	8
		447	38	27	39	33	47	38	48	42	32	39	31	33	3	.....	4	20
Ottawa.....	M	1,646	132	138	135	157	142	128	138	141	146	131	124	134	36	.....	118	87
	F	1,604	151	121	137	137	145	124	112	133	122	129	109	184	40	.....	119	78
		3,250	283	259	272	294	287	252	250	274	268	260	233	318	38	.....	237	165
Owen Sound.....	M	176	14	10	18	9	9	15	26	16	8	23	18	10	2	.....	6	13
	F	156	18	14	11	14	8	8	14	13	6	20	19	11	2	.....	6	8
		332	32	24	29	23	17	23	40	29	14	43	37	21	2	.....	12	21

BIRTHS BY MONTHS AND SEX—CITIES, 1921.—*Concluded.*

Cities	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins	No. cases of triplets.	Illegitimates.	Still-Births
Peterborough.....	M	284	19	18	20	23	23	24	30	33	31	18	26	19	5	.....	4	24
	F	270	17	29	28	27	17	17	24	24	25	25	17	20	3	.....	.....	14
		554	36	47	48	50	40	41	54	57	56	43	43	39	4	.....	4	38
Port Arthur.....	M	247	20	19	33	20	23	16	20	17	29	15	16	19	4	.....	8	24
	F	271	27	13	22	20	28	34	19	24	22	28	18	16	12	.....	4	6
		518	47	32	55	40	51	50	39	41	51	43	34	35	8	.....	12	30
St. Catharines.....	M	357	34	26	33	34	30	39	29	32	20	34	27	19	13	.....	2	15
	F	353	29	24	26	27	28	32	36	32	27	30	29	33	11	.....	3	17
		710	63	50	59	61	58	71	65	64	47	64	56	52	12	.....	5	32
St. Thomas.....	M	195	24	18	19	19	8	18	18	20	18	13	11	9	1	.....	3	8
	F	190	20	21	14	14	16	17	13	17	15	12	15	16	7	.....	2	10
		385	44	39	33	33	24	35	31	37	33	25	26	25	4	.....	5	18
Sarnia	M	206	16	17	15	12	18	25	19	18	23	19	14	10	3	.....	2	9
	F	173	14	21	13	9	17	18	11	11	23	13	12	11	3	.....	.....	8
		379	30	38	28	21	35	43	30	29	46	32	26	21	3	.....	2	17
Sault Ste Marie..	M	371	34	30	31	31	37	31	31	27	28	32	22	37	1	.....	3	19
	F	335	22	25	31	31	45	27	22	26	20	35	22	29	5	.....	5	12
		706	56	55	62	62	82	58	53	53	48	67	44	66	3	.....	8	31

Stratford.....	M	247	21	20	21	20	15	25	25	25	20	21	18	16	2	.....	3	17
	F	211	17	18	14	16	19	21	18	14	20	26	15	13	2	.....	2	9
		458	38	38	35	36	34	46	43	39	40	47	33	29	2	.....	5	26
Toronto.....	M	7,044	602	558	645	597	649	608	616	584	594	527	530	534	126	1	240	423
	F	6,334	473	523	608	548	566	551	575	525	491	479	505	490	120	2	248	257
		13,378	1,075	1,081	1,253	1,145	1,215	1,159	1,191	1,109	1,085	1,006	1,035	1,024	123	1	488	680
Welland.....	M	142	7	8	18	10	9	15	14	8	12	9	11	21	2	.....	1	7
	F	122	7	8	19	4	9	15	6	11	10	9	12	12	.....	.....	3	3
		264	14	16	37	14	18	30	20	19	22	18	23	33	1	.....	4	10
Windsor.....	M	700	64	46	53	65	70	65	63	62	60	50	38	64	20	.....	16	29
	F	626	53	47	46	53	61	63	43	53	59	52	42	54	8	.....	6	36
		1,326	117	93	99	118	131	128	106	115	119	102	80	118	14	.....	22	65
Woodstock.....	M	134	6	9	15	18	13	11	14	9	5	10	13	11	3	.....	2	3
	F	112	8	13	8	9	8	6	11	9	8	10	8	14	1	.....	4	5
		246	14	22	23	27	21	17	25	18	13	20	21	25	2	.....	6	8

BIRTHS BY MONTHS AND SEX—TOWNS. 1921.

Towns.	Sex.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins	No. cases of triplets.	Illegitimates.	Still-Births.
Grand Total		4,876	363	372	458	469	437	367	434	391	439	354	416	376	45		74	242
Total Males		2,560	162	202	230	243	242	190	235	203	217	202	228	206	44		41	145
Total Females		2,316	201	170	228	226	195	177	199	188	222	152	188	170	46		33	97
Barrie	M	106	6	10	6	10	12	4	7	13	10	10	8	10			3	5
	F	84	13	5	7	6	5	5	10	4	8	4	9	8				2
		190	19	15	13	16	17	9	17	17	18	14	17	18			3	7
Brockville	M	126	5	13	12	16	7	11	10	8	17	8	11	8	6		4	6
	F	132	13	13	12	13	11	9	10	14	12	8	7	10	2			6
		258	18	26	24	29	18	20	20	22	29	16	18	18	4		4	12
Cobourg	M	69	5	5	5	10	8	2	3	7	6	5	8	5			2	6
	F	47	5	6	5	5	2	3	4	3	5	2	5	2	2		2	4
		116	10	11	10	15	10	5	7	10	11	7	13	7	1		4	10
Collingwood	M	65	2	7	4	8	6	4	2	3	7	6	8	8	4		2	3
	F	65	2	9	4	2	7	8	8	6	5	1	7	6	2		1	1
		130	4	16	8	10	13	12	10	9	12	7	15	14	3		3	4
Cornwall	M	169	13	12	13	11	23	15	17	11	11	13	20	10			2	11
	F	152	11	8	9	15	20	14	15	12	17	11	15	5			6	7
		321	24	20	22	26	43	29	32	23	28	24	35	15			8	18

Eastview.....	M	56	1	3	4	3	3	4	10	10	7	5	1	5	2	.....	1	4
	F	49	.....	3	7	2	1	7	3	10	5	.....	4	7	2	.....	.....	2
		105	1	6	11	5	4	11	13	20	12	5	5	12	2	.....	1	6
Ford City.....	M	100	4	6	3	6	10	9	13	4	9	7	9	20	4	.....	3	10
	F	86	7	3	8	8	12	4	8	5	14	7	9	1	2	.....	2	3
		186	11	9	11	14	22	13	21	9	23	14	18	21	3	.....	5	13
Hawkesbury.....	M	138	10	15	15	13	14	7	17	10	10	12	6	9	7	.....	.....	7
	F	120	18	5	10	8	16	15	7	8	8	9	6	10	7	.....	1	6
		258	28	20	25	21	30	22	24	18	18	21	12	19	7	.....	1	13
Ingersoll.....	M	78	4	4	16	7	3	3	6	7	8	5	10	5	2	.....	1	3
	F	57	5	3	10	7	4	3	2	3	9	3	2	6	.....	.....	2	5
		135	9	7	26	14	7	6	8	10	17	8	12	11	1	.....	3	8
Kenora.....	M	85	5	11	4	9	7	12	4	7	8	7	6	5	2	.....	.....	3
	F	71	5	9	7	7	4	5	3	5	5	10	6	5	4	.....	.....	1
		156	10	20	11	16	11	17	7	12	13	17	12	10	3	.....	.....	4
Lindsay.....	M	116	7	10	15	14	14	4	10	11	8	5	9	9	.....	.....	1	6
	F	87	7	10	12	6	5	2	6	11	4	4	7	13	2	.....	3	5
		203	14	20	27	20	19	6	16	22	12	9	16	22	1	.....	4	11
Midland.....	M	110	10	3	16	12	8	10	6	10	11	12	3	9	1	.....	4	1
	F	118	7	3	9	14	11	10	13	10	12	12	11	6	3	.....	2	1
		228	17	6	25	26	19	20	19	20	23	24	14	15	2	.....	6	2
North Bay.....	M	236	17	26	25	26	23	20	24	18	11	12	17	17	.....	.....	1	13
	F	181	14	10	23	19	17	9	14	17	17	12	15	14	.....	.....	1	10
		417	31	36	48	45	40	29	38	35	28	24	32	31	.....	.....	2	23

BIRTHS BY MONTHS AND SEX—TOWNS, 1921.—*Concluded.*

Towns.	Sex.	Total.	January	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No. pairs of twins.	No. cases of triplets.	Illegitimates.	Still-Births.
Orillia	M	128	9	9	11	8	15	8	9	14	12	13	15	5	.....	.....	3	10
	F	121	7	11	10	16	6	11	18	6	11	3	16	6	2	.....	1	4
		249	16	20	21	24	21	19	27	20	23	16	31	11	1	.....	4	14
Oshawa	M	200	15	10	14	14	17	16	19	18	19	23	22	13	4	.....	5	16
	F	209	23	19	20	19	15	18	17	18	21	19	10	10	.....	.....	2	9
		409	38	29	34	33	32	34	36	36	40	42	32	23	2	.....	7	25
Pembroke	M	151	9	13	9	16	20	14	15	6	13	7	13	16	2	.....	2	14
	F	147	18	9	18	12	11	10	9	14	15	3	12	16	6	.....	2	5
		298	27	22	27	28	31	24	24	20	28	10	25	32	3	.....	4	19
Preston	M	80	9	7	2	10	6	5	10	5	8	9	6	3	2	.....	1	1
	F	61	4	5	3	4	7	4	10	6	3	8	3	4	2	.....	.....	3
		141	13	12	5	14	13	9	20	11	11	17	9	7	2	.....	1	4
Smith Falls	M	99	8	3	8	5	7	10	11	8	14	8	7	10	1	.....	2	4
	F	97	5	13	7	10	1	10	8	8	14	9	6	6	3	.....	2	4
		196	13	16	15	15	8	20	19	16	28	17	13	16	2	.....	4	8
Sudbury	M	201	11	13	14	23	16	12	20	16	11	21	26	18	7	.....	2	11
	F	215	21	12	21	29	24	14	18	11	20	13	17	15	5	.....	2	11
		416	32	25	35	52	40	26	38	27	31	34	43	33	6	.....	4	22

Trenton	M	75	6	9	7	3	9	4	9	5	5	5	5	8	.....	.....	1	5
	F	67	7	3	7	5	8	7	3	5	4	4	6	8	2	.....	3	3
		142	13	12	14	8	17	11	12	10	9	9	11	16	1	.....	4	8
Walkerville	M	71	2	6	13	4	1	7	9	3	6	4	11	5	.....	.....	.....	3
	F	87	6	7	11	11	.....	7	8	7	8	6	8	8	.....	.....	.....	4
		158	8	13	24	15	1	14	17	10	14	10	19	13	.....	.....	.....	7
Waterloo	M	101	4	7	14	15	13	9	4	9	6	5	7	8	.....	.....	1	3
	F	63	3	4	8	8	8	2	5	5	5	4	7	4	.....	.....	1	1
		164	7	11	22	23	21	11	9	14	11	9	14	12	.....	.....	2	4

MARRIAGES BY MONTHS—COUNTIES, 1921.

Counties	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Grand Total..... (all Municip'ties)	24,871	1,668	1,473	1,861	2,077	1,689	3,738	1,715	2,063	2,863	2,145	1,869	1,710
Total Counties (excluding Cities and Towns)...	9,065	616	552	801	722	558	1,402	537	711	1,028	775	705	658
Algoma.....	103	3	5	10	13	3	14	9	12	16	8	6	4
Brant.....	96	7	6	11	12	13	12	4	7	7	7	5	5
Bruce.....	273	9	14	28	21	18	49	15	18	41	19	30	11
Carleton.....	164	18	7	10	9	7	32	10	14	21	9	15	12
Dufferin.....	89	5	7	13	7	3	18	2	6	8	5	12	3
Elgin.....	140	13	5	13	6	4	20	12	14	18	11	7	17
Essex.....	332	31	27	14	35	31	37	20	28	40	34	18	17
Frontenac.....	90	3	5	5	9	3	19	4	10	10	9	7	6
Grey.....	264	21	18	33	24	11	38	13	14	33	27	15	17
Haldimand.....	132	6	5	11	8	8	22	5	5	22	20	12	8
Haliburton.....	24	.....	2	4	2	.....	3	.....	1	3	3	1	5
Halton.....	134	5	8	22	7	13	25	5	8	11	14	9	7
Hastings.....	241	23	15	28	17	19	36	10	23	28	11	14	17
Huron.....	285	13	23	28	18	12	52	13	28	31	20	26	21
Kenora.....	32	1	4	2	2	4	1	1	3	5	1	6	2
Kent.....	290	31	20	34	23	20	31	17	17	29	15	32	21
Lambton.....	204	9	17	24	12	14	29	10	15	19	25	15	15
Lanark.....	163	9	10	12	10	7	33	7	15	23	11	15	11
Leeds&Grenville.	240	20	18	17	16	15	33	11	17	29	27	16	21
Lennox & Add...	135	13	4	11	4	18	17	11	7	14	13	8	15
Lincoln.....	126	6	9	4	6	10	22	11	11	19	12	10	6
Manitoulin.....	74	3	3	3	6	4	11	4	11	8	9	6	6
Middlesex.....	241	10	15	28	12	13	36	13	27	23	23	20	21
Muskoka.....	152	7	4	12	15	10	25	9	10	16	18	10	15
Nipissing.....	166	16	5	9	19	10	21	7	23	20	19	11	6
Norfolk.....	191	6	13	21	17	13	29	16	10	27	15	13	11
North. & Durham	346	19	17	35	39	25	43	19	26	37	28	26	32
Ontario.....	200	13	15	22	19	3	38	10	16	17	20	14	13
Oxford.....	157	8	10	22	7	9	29	3	5	17	15	18	14
Parry Sound....	196	16	10	14	19	11	31	9	18	20	22	11	15
Peel.....	134	6	7	6	7	10	32	8	8	11	9	17	13
Perth.....	216	12	15	24	17	10	35	11	15	27	12	24	14
Peterboro.....	96	4	3	12	11	4	18	3	5	12	11	8	5
Prescott&Russell.	254	32	12	9	27	15	38	16	20	33	28	13	11
Prince Edward...	117	10	9	13	8	5	15	6	7	10	7	12	15
Rainy River.....	78	7	5	8	7	13	8	7	6	2	3	4	8
Renfrew.....	291	17	13	11	22	16	52	27	31	34	32	24	12
Simcoe.....	321	23	23	30	22	15	65	17	20	37	27	20	22

MARRIAGES BY MONTHS—COUNTIES, 1921—Continued.

Counties	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Stormont, Dundas & Glengarry.	321	24	26	19	27	22	50	16	22	35	28	33	19
Sudbury	162	13	10	9	19	11	26	11	15	16	13	13	4
Thunder Bay	29	4	1	.....	8	1	4	.....	4	5	1	1	.....
Timiskaming	385	23	22	30	34	22	52	38	32	47	20	36	29
Victoria	102	4	4	6	6	3	23	8	11	12	10	7	8
Waterloo	141	14	10	11	5	10	15	9	8	16	15	12	16
Welland	307	28	16	24	28	18	38	24	27	38	24	17	25
Wellington	193	14	16	18	15	11	33	15	17	13	14	11	16
Wentworth	150	6	13	17	12	9	23	8	12	13	11	9	17
York	488	31	26	54	32	32	69	31	32	55	40	36	50

MARRIAGES BY MONTHS IN THE CITIES OF ONTARIO, 1921.

Cities	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total	14,134	934	832	945	1,197	1,008	2,109	1,065	1,206	1,646	1,210	1,034	948
Belleville	159	6	10	8	20	8	20	21	17	16	11	12	10
Brantford	329	31	22	21	32	21	47	25	15	34	34	29	18
Chatham	212	16	12	16	17	20	30	7	10	25	20	24	15
Fort William	204	19	12	12	11	12	21	19	20	23	20	22	13
Galt	125	11	8	12	9	9	16	12	9	16	8	6	9
Guelph	226	15	14	10	11	19	33	9	25	29	21	19	21
Hamilton	1,354	77	91	91	107	102	216	100	115	158	111	89	97
Kingston	262	19	10	16	20	21	40	17	22	33	21	21	22
Kitchener	247	13	8	18	14	19	38	14	31	24	24	19	25
London	672	46	24	50	50	49	101	52	51	82	62	47	57
Niagara Falls	383	28	27	27	34	32	42	45	34	51	19	28	16
Ottawa	1,149	72	52	60	117	90	174	60	99	150	113	93	69
Owen Sound	109	3	8	11	6	7	15	9	6	14	10	8	12
Peterboro	260	12	19	21	26	20	44	14	15	34	20	21	14
Port Arthur	165	12	9	7	17	11	21	16	18	12	19	13	10
St. Catharines	259	18	13	11	28	11	42	25	22	27	22	21	18
St. Thomas	170	7	10	10	14	11	29	11	16	17	17	10	18
Sarnia	166	10	16	17	10	12	29	7	11	15	10	15	14
Sault Ste. Marie	245	21	18	17	19	19	21	23	24	28	22	20	13
Stratford	200	10	14	16	15	9	28	14	23	25	16	13	17
Toronto	6,309	406	365	437	539	433	981	475	540	745	533	442	413
Welland	148	13	9	11	14	12	23	19	8	15	8	11	8
Windsor	653	61	52	33	55	52	78	61	60	59	58	43	41
Woodstock	128	8	9	13	12	9	20	10	14	14	10	8	1

MARRIAGES BY MONTHS IN THE TOWNS OF ONTARIO, 1921.

Towns	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total	1,672	118	89	115	158	123	227	113	146	189	160	130	104
Barrie	67	6	1	6	1	8	12	4	7	7	8	5	2
Brockville	114	14	6	6	8	3	17	8	13	20	4	7	8
Coburg	54	2	1	3	3	5	8	3	3	12	5	5	4
Collingwood	63	5	3	7	7	4	7	2	6	8	3	5	6
Cornwall	103	9	5	9	5	3	18	7	9	9	9	16	4
Eastview	18	2	.....	3	2	2	2	.....	.....	1	5	1	.....
Ford City	40	3	1	1	5	6	7	2	1	8	3	2	1
Hawkesbury	42	6	....	1	8	6	5	5	1	2	4	3	1
Ingersoll	54	5	6	6	10	5	5	2	2	5	1	6	1
Kenora	66	4	8	3	2	4	8	5	6	9	10	2	5
Lindsay	111	4	13	7	8	9	15	6	9	11	11	5	13
Midland	61	2	1	11	10	3	4	4	4	4	5	7	6
North Bay	124	9	6	6	15	10	18	12	10	12	13	5	8
Orillia	93	2	2	8	9	11	5	6	13	10	13	9	5
Oshawa	111	10	2	11	11	3	24	6	7	9	10	8	10
Pembroke	80	4	6	3	6	6	9	8	6	13	8	7	4
Preston	45	2	1	1	1	6	13	5	.....	2	2	3	9
Smith's Falls	63	3	4	1	4	6	4	6	7	9	10	6	3
Sudbury	112	11	7	9	14	10	9	6	11	13	5	12	5
Trenton	78	3	3	5	9	5	9	4	8	9	12	6	5
Walkerville	115	8	9	5	15	7	18	7	18	9	10	7	2
Waterloo	58	4	4	3	5	1	10	5	5	7	9	3	2

Marriages by Denominations in the Province of Ontario, 1921.

(Including all Municipalities)

Denominations of Grooms.	Total Grooms	Denominations of Brides.																													
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists	9	5														1		2		1											
Anglicans	5,327	2	3,321	178	4	6	7	3	20	3	6	4		1	2	37		714	5	778	196	8		5	2	3			13	9	
Baptists	1,349		186	623	4	3	1	2	9	2	4		1			15	2	256	2	183	44	4		1					3	4	
Brethren	45		1	1	31												1	5		4	1	1									
Christians	55		7	3	1	28											1	5		8	2										
Christian Science	32		10		1		11				1							5		2	2										
Church of Christ	23		2	2				11		1	1							5			1										
Congregationalists	160		27	8		1			44	2								36		36	4	1			1						
Disciples	31		2	4						14								10		8	1		1	1							
Evangelicals	98		4	8	1	1					52					7		8		11	5							1			
Friends	10		1									5						2		2											
Greek Church	213		13	2									154			2		5		8	26			1				1	1		
Holiness Movement	16								1					10				4		1											
Jews	347		4	1											333			2		4	2							1			
Lutherans	550		22	17			1		1	1	11		1		1	382	2	47	1	36	23	2		1		1					
Mennonites	99		4								1					3	81	5		2	1		1			1					
Methodists	5,900	4	784	280	5	8	6	2	20	10	10	2		2	2	38	4	3,709	5	841	138	10		4		2	3		8	2	
Mormons	45		2	3					2									9	24	3	1										
Presbyterians	5,446	3	843	202	6	5	3	2	24	6	13				1	30	3	909	9	3,193	165	9	3	3	1	1	1		7	4	
Roman Catholics	4,491		229	48				1	3		2		2	1	1	29	1	119	1	153	3,857	1		40		1			2		
Salvation Army	96		5	1					1									8		6		75									
Pentecostal	17																	1					16								
Protestants	349		13	2		1	1		2		1					2		8		13	29			277							
Union Church	5																			2	1				2						
United Brethren	23										1							4		3	1					13				1	
Unitarians	4		1	1																1	1										
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)	2		1																		1										
No religion	44		8															5		4	3			1					24		
Other sects	75		4	2	1				2							1		13		4	1	1		1					1	44	
Total Brides	24,871	14	5,494	1,386	54	53	30	21	129	39	103	11	158	15	339	547	94	5,896	47	5,307	4,506	112	22	334	5	23	4		63	65	

Marriages by Ages in the Province of Ontario, 1921.

(Including all Municipalities)

AGES OF BRIDES.

Age of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51-55	56-60	61-65	66-70	71-75	76-79	80 & over	Not stated
Under 18	24	10	8	4	1	1																																					
18	158	28	62	28	13	14	7	2	4																																		
19	436	46	154	100	62	39	16	12	1	2	2					2																											
20	800	75	179	161	172	87	57	30	19	5	3	6	1	2	2								1																				
21	1895	118	405	364	298	309	183	105	50	26	12	8	8	2	2	1	1	1				1																				1
22	1697	76	240	259	245	273	237	142	83	61	22	19	12	5	7	3	4		1	2	2	1	2																				1
23	1841	82	204	249	254	259	254	226	133	65	42	31	16	9	7	2	3	1	2			1					1															1
24	1913	67	190	197	212	245	240	221	232	112	72	51	30	19	7	2	4	3	4		2	1																				
25	1800	66	152	154	154	191	201	211	237	157	85	84	40	20	19	8	8	2	1	3	1		1	3					1													2
26	1760	54	105	140	154	200	175	195	146	176	162	101	49	33	27	14	12	5	4	1	2	1	1				2			1											1
27	1611	52	82	114	127	139	157	166	154	146	156	127	68	40	28	15	14	9	6		4	4	1							1												1
28	1384	31	71	63	84	111	113	137	129	124	100	110	126	62	43	21	18	10	7	9	3	4	3	2	1									1								1
29	1186	21	30	65	70	90	84	111	90	114	113	97	94	85	45	24	15	12	10	9	1	1	2							1		1										1
30	1012	13	24	35	60	53	88	73	77	94	80	83	89	63	63	31	19	17	8	14	9	1	8	2	3	1	2			1												1
31	797	13	19	19	33	62	51	50	59	57	66	62	58	52	61	46	26	14	14	10	8	7	6	2	1		1															
32	745	8	20	28	24	39	47	61	40	57	54	53	58	29	40	37	45	25	24	21	8	5	6	3	1	1	2		1		1											1
33	612	8	13	14	17	43	28	40	38	34	50	47	32	36	32	35	33	39	27	9	5	7	5	7	3	3	3	1		1				1	1						
34	507	5	13	12	16	18	21	28	47	26	34	35	29	34	31	16	36	26	18	18	13	9	4	3	4	1	3	1		3			1									2
35	569	3	10	14	16	28	13	18	30	50	40	32	37	35	34	29	29	28	29	33	18	6	10	7	8	1	1	3	1	4				1								1
36	366	2	10	9	4	19	9	11	30	24	23	26	21	19	16	20	17	10	22	16	12	10	8	6	9	1	6	4				1										1
37	369	2	2	4	7	9	14	17	16	22	31	23	29	11	26	15	23	20	20	9	14	21	13	5	5	1	2	1	2	2	1				1							1
38	379	1	8	7	3	11	9	10	16	20	19	15	39	18	19	19	17	17	17	18	16	16	22	11	13	3	5	3	1	2	1		2	1								
39	275	1	2	1	1	8	2	12	6	10	12	11	11	22	23	17	18	12	13	14	13	7	8	23	6	6	3	4	2	3	1	2			1							
40	285		1	4	4	6	9	7	7	12	12	12	17	9	20	18	15	9	14	18	20	8	13	10	17	2	8	2	2	2	1	2		1	2	1						
41	205	1	2	3	6	3	3	2	3	6	11	9	15	11	13	8	7	10	10	9	19	5	7	6	6	10	5	4	1	1	1	2		1		2						
42	235	1	2	2	1	1	3	3	2	4	6	9	7	11	9	22	14	7	11	16	13	14	11	8	12	5	15	5	6	2	1	1	3	1	2	4	1					
43	157	1	1	2		3	2	4	3	5	3	9	5	10	3	6	9	9	9	7	7	5	6	6	4	3	9	9	4	4	1	1	3	2	1		1					
44	128			1	1	1	3	3	3	4	2	3	3	4	5	4	7	5	10	6	7	5	3	10	8	6	2	9	7	2	2	3		1		1						
45	187		3	2	1	2		2	4	3	2	4	2	5	7	6	7	10	8	13	7	8	7	7	10	4	11	11	12	9	6	2	1	2	1	3	2					
46	107			1	1	1		2				1	3	2	4	5	2	3	6	5	12	4	4	4	7	4	5	5	3	6	6	3	2	2		2	1					
47	108					1		1	3		2	2	3	5	3	2	1	3	6	2	4	7	8	7	3	9	6	2	3	3	4	4	5	3	3	1	2					
48	119	1				2		1	1	1	3	2	1	4	2	7	2	4	3	3	6	7	5	7	1	5	4	6		6	3	9	2	11	1	2	4	2				
49	108					1				2	1	1	1	7	1	2	4	3	2		3	2	4	6	5	4	2	8	9	8	1	5	2	5	3	5	35	5	1				
50	117					2	1			4	1	1	2	1	1	5		1	2	6	7	5	7	7	4	9	2	2	7	5	7	4	8	3	1	3	6	2				1
51-55	348		1			3		2	6	3	3	3	2	6	8	10	8	7	12	12	11	7	19	5	15	11	14	19	12	12	13	12	18	14	18	40	18	3			1	
56-60	293			1						2		1	4	1	1	2	4	4	6	7	6	6	11	5	10	7	11	11	8	10	15	10	12	16	13	56	31	8	2			
61-65	161				1		1		3			1	1				1		2	2		2	2	3	2	2	1	2	6	3	1	3	8	4	11	29	33	28	7	1			1
66-70	97										2				1	1					1		2	1	1	2		2		2	4		1	3	7	19	24	17	6	1			
71-75	40																					1	1			1		1			2	1	1			5	12	8	5	2			
76-79	23		1												1																1			1	3	1	6	6	3			
80 & over	7																																			1	3	1	2			
Not stated	10	1																	1	1																						7
Total Brides	24,871	787	2014	2057	2048	2269	2029	1907	1681	1428	1227	1080	923	663	619	449	427	328	327	302	255	192	214	152	173	89	130	116	91	93	80	66	75	56	70	185	134	74	27	9	1		24

Marriages by Denominations in the Counties of Ontario, 1921.

(Excluding Cities and Towns of 5,000 and over.)

Denominations of Grooms.	Total Grooms	DENOMINATIONS OF BRIDES.																													
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists	2															1		1													
Anglicans	1,395		791	49	1	3			5		1	3		1		12		269		222	32	1			1	1			2	1	
Baptists	430		49	181	2			1	1	2	4					7	2	112		58	9								1	1	
Brethren	17		1		9												1	3		2	1										
Christians	23		4	1		9												4		5											
Christian Science	4						3				1																				
Church of Christ	10			2				6										2													
Congregationalists	48		3	2					12	1								15		15											
Disciples	24			1						10								7		5				1							
Evangelicals	57		1	5	1	1					34					4		2		8									1		
Friends	6											2						2		2											
Greek Church	20		1	1									15					1		1	1										
Holiness Movement	9													5				4													
Jews	6			1											4					1											
Lutherans	242		8	3						1	7					173		25	1	16	6	1		1							
Mennonites	77		1													1	68	4		2						1					
Methodists	2,678	1	237	101	1	5	2	1	6	6	5			1		15	2	1,873	2	376	32	3	1	2		1			4	1	
Mormons	14		1	1					1									3	6	1									1		
Presbyterians	2,067		238	67	1	3			9	1	6			1		10	3	418	6	1,263	33	1		2	1	1	1		2		
Roman Catholics	1,834		40	11										1		9		39		29	1,690			14					1		
Salvation Army	18		1															3		3		11									
Pentecostal	7																	1					6								
Protestants	145		3	1												2		1		5	15			118							
Union Church	4																			2	1				1						
United Brethren	10																	1		1						7				1	
Unitarians	2			1																1											
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)	1																				1										
No religion	14		2															2		1									9		
Other sects	15																	6												9	
Total Brides	9,179	1	1,381	428	15	21	5	8	34	21	58	5	15	9	4	234	76	2,798	15	2,019	1,821	17	7	138	3	11	1		21	13	

Marriages by Ages in the Counties of Ontario, 1921.

Including all Municipalities.

Ages of Bride-grooms	Total grooms	AGES OF BRIDES. Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 & over	Not stated
Under 18	13	6	5	1	1																																						
18	83	15	31	12	8	10	3	1	3																																		
19	143	20	46	25	23	12	8	6	1	2																																	
20	294	36	66	47	59	33	22	16	9	3			1	1	1																												
21	694	61	153	121	102	107	74	35	18	7	9	2	3		1		1																										
22	632	39	97	99	82	101	68	60	35	21	11	5	2		5	1	3			1	1		1																				
23	716	43	82	109	85	96	92	81	44	37	10	16	10	4	4	1						1					1																
24	756	32	71	87	93	102	95	89	75	42	25	18	15	5	2	1		1	1		1	1																					
25	710	39	67	68	54	77	79	80	95	42	32	32	18	5	8	5	2	1	1	1			1	2					1														
26	684	29	51	60	68	80	62	70	56	62	57	39	11	9	10	5	6	3	2		1			1			1			1												
27	567	24	39	51	56	50	47	57	47	54	50	40	18	11	11	2	2	1	3		1	2								1												
28	534	14	27	28	37	56	47	49	48	54	32	45	44	16	12	10	4	3	2	1	2	1	1		1																		
29	386	10	14	29	25	34	32	33	26	38	35	30	32	17	9	6	4	4	3	2			1								1											1
30	351	8	9	18	20	21	30	23	25	38	24	31	30	18	23	9	5	6	1	7	1	4																				
31	269	7	5	6	13	30	19	16	18	18	17	15	21	18	23	18	11	2	6	2	1	1	1		1																		
32	290	4	13	12	14	22	22	23	16	25	20	28	16	9	10	13	17	9	4	5	1	3	2	1			1																
33	211	1	8	7	9	13	12	19	11	12	15	16	6	10	11	12	17	12	9	3	2	1	1	1	1			1							1								
34	188	4	8	7	7	6	10	8	17	12	13	14	12	12	7	6	13	8	7	7	3	1	2		3																		1
35	195	3	6	2	7	10	3	7	12	26	17	13	5	7	13	13	9	8	10	7	7	2	2	3	1			1														1
36	134	2	5	5	1	3	4	3	12	8	6	12	8	6	8	6	7	1	10	5	3	4	4	2	2	1	4	2														
37	115	2		2	4	3	5	5	7	5	13	7	13	4	8	5	4	2	4	4	4	5	4	1	3		1																
38	130	1	4	3	1	1	3	3	7	6	8	4	12	5	7	9	8	5	7	8	5	5	8	3	4	3																
39	85	1			1	1	2	7	1	1	6	3	6	7	7	6	8	3	2	3	1	4	1	7	2	2	1	1	1														
40	94			1	2	3	3	4	1	6	3	6	3	2	7	5	7	5	1	8	5		3	5	6		3	1		2		1		1								
41	82	1		1	2	2	2	1	1	2	5	4	8	3	6	5	2	6	3	6	8	2	3	1	2	2	1	1		1		1										
42	74	1	1		1	1	1	1		4	2	5	2	6	2	5	6	1	2	6	4	3	4	1	2	1	4	1	1		1	2	1	1	1							
43	51	1				1	1		1	3		4	2	4	2	1	4	4	7	1	1	1	3	2			1	2		1		1	2	1								
44	38				1			2	2				3	2	3		2	1	3	1	2	2	1	4	1	2	1	3	1			1										
45	64		2	1			1	2	3	2	1	1	1	3	3	4	4	5	2		1	3	3	1	3	2	4	2	3	1	1	1		1	1	1						
46	35			1				1			1		1	1	2	1			3	2	6	1	1	1	1		2	1		2	2	1	2	1		1					
47	36				1			2				2	1				1	2	1	1	2	4	4		3	2	1	1			2	2	2	1		1					
48	45	1			1		1	1	1	1	1			2		3	2	1	3	3	2	3		3		3		4	1	2		3	1		1	1					
49	38								1	1		1	2		1	2			1	1	1	3	1	4	2	2	2	2		2	1	2	1	2	2		1				
50	42				1	1			1	1				1	2		1	1	3	2	1	2	2	1	3	1		3	2	4		3	1	1	1	2	1					
51–55	130					3			2	1	2		2	3	5	2	3	1	2	4	3	3	5	2	3	5	4	8	5	4	6	3	9	5	9	17	7	2				
56–60	119									1			1	1		1	2	1	2	4	3	1	4	2	6	2	3	5	6	9	2	6	4	24	18	6					
61–65	75								2			1	1				1		1	2		1	1	1	1	1	1	3	1		1		2	4	16	16	13	3				1
66–70	46										1					1					1		1		1		2					1		3	9	14	8	3	1			
71–75	16																															1			2	5	4	2	2			
76–79	7																																		1		2	2	2			
80 & over	1																																						1			
Not stated	6	1																	1																							4
Total Brides	9,179	406	810	803	779	879	748	705	598	535	416	394	310	190	214	154	159	98	104	97	75	57	75	41	54	27	42	34	27	24	21	27	27	22	25	79	63	36	10	6			8

Marriages by Denominations in Cities of less than 40,000 Population, 1921.

DENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES																													
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists	5	4																1													
Anglicans	858	1	540	29			3	2	4	1	4				1	11		107	3	112	35	1		3	1						
Baptists	282		36	132	1	1			3				1			3		56	1	30	16									2	
Brethren	6				5													1													
Christians	11		1	1		6												1		1									1		
Christian Science	7		3				2											1			1										
Church of Christ	4		1								1							1			1										
Congregationalists	35		6	1		1			7	1								8		7	2	1				1					
Disciples	7		1	1						2								2			1										
Evangelicals	26		2	2							10					3		4		2	3										
Friends	1											1																			
Greek Church	59		2	1									43			1		1		2	8								1		
Holiness Movement	3													3																	
Jews	24		3												21																
Lutherans	200		6	10							2				1	146		10		11	12	1				1					
Mennonites	8															1	5	1					1								
Methodists	1,105	3	141	35	1	3		1	3	3	4					17	1	684	3	140	30	1				1			4		
Mormons	15		1	2														4	7	1											
Presbyterians	940		127	38			1		5	3	4					14		171	2	528	41	2		1					1	2	
Roman Catholics	857		64	18				1	2		2		1			12	1	29		42	668	1		15		1					
Salvation Army	29		1															1		2		25									
Pentecostal	1																						1								
Protestants	85		3			1	1		2		1									4	11			62							
Union Church	1																								1						
United Brethren	10										1							2		1	1					5					
Unitarians	1																				1										
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)	1		1																												
No religion	10		3															2			1								4		
Other sects	18		2	1					1							1		1		1		1								10	
Total Brides	4,609	8	944	271	7	12	7	4	27	10	29	1	45	3	23	209	7	1,088	16	884	832	33	2	81	2	9			11	14	

Ages of Bridegrooms and Brides for the Cities of less than 40,000 population, 1921.

AGES OF BRIDES.

Ages of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 & over	Not stated
Under 18	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	25	3	10	7	3	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	86	9	37	14	12	9	2	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	145	13	37	31	29	15	12	2	2	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	384	21	107	74	61	60	26	19	6	7	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	327	15	50	44	56	54	44	25	16	8	4	2	3	2	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
23	349	17	45	45	46	50	40	53	21	10	9	6	2	2	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	377	17	50	48	28	40	43	43	47	16	19	10	2	8	2	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	284	10	38	28	26	28	29	38	26	30	10	7	6	4	...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	294	9	19	20	27	33	38	26	28	35	21	17	6	6	3	2	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	307	12	19	21	25	32	32	31	30	22	26	15	12	9	4	6	4	4	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	255	9	16	15	19	21	21	17	19	23	14	20	19	12	11	4	5	...	2	4	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	232	5	6	16	17	15	24	20	17	17	21	18	17	17	11	1	2	2	2	2	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
30	171	2	4	7	9	9	18	14	10	15	8	12	17	12	8	3	4	5	2	3	1	1	3	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
31	147	3	6	5	5	11	12	8	15	11	12	11	9	6	8	7	5	3	2	1	3	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	114	2	2	5	4	2	7	12	13	8	4	7	12	9	5	3	6	1	4	3	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33	123	4	4	5	3	9	6	5	9	5	5	12	4	10	3	10	5	11	4	...	...	4	1	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
34	85	...	1	3	4	3	4	2	3	5	7	8	6	5	5	5	9	1	4	3	1	1	...	1	1	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
35	113	...	...	5	1	6	6	3	6	8	9	8	12	4	4	3	7	5	4	6	2	3	2	1	2	1	...	2	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...
36	66	...	1	1	2	6	...	3	3	4	3	3	6	5	3	5	3	2	3	5	...	2	2	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
37	77	...	...	1	...	2	3	2	3	7	4	4	5	2	7	1	4	6	6	1	5	3	5	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
38	77	...	2	3	1	4	3	2	1	2	5	4	4	5	3	3	3	3	4	3	4	5	3	2	3	...	1	1	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...
39	58	...	1	...	...	2	...	...	3	4	1	2	2	5	4	4	3	1	6	1	2	...	2	4	2	3	1	1	...	3	...	...	...	...	1	...	...	...	...	...	...	...
40	45	...	1	...	...	1	...	...	1	...	1	4	...	3	6	5	3	1	3	1	4	...	1	...	3	...	5	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
41	37	...	1	1	...	...	1	...	1	2	1	1	...	3	4	3	...	2	...	1	5	...	2	2	...	2	1	1	...	1	1	...	...	...	2	...	...	...	...	...	...	...
42	40	...	...	...	...	...	...	1	...	...	1	2	2	2	1	2	5	...	...	2	4	4	...	3	3	...	3	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
43	37	...	1	...	...	1	...	...	...	...	1	1	...	3	1	...	1	4	...	2	2	2	...	...	3	1	3	4	2	2	...	...	1	...	1	...	1	...	...	...	...	...
44	36	...	...	...	...	...	...	...	...	3	...	1	...	1	1	3	1	2	2	...	...	...	...	3	4	1	...	5	2	2	2	1	...	1	...	1	...	...	...	...	...	...	...
45	32	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	1	...	3	5	...	2	...	1	...	...	1	...	3	2	3	1	1	1	...	1	...	...	...	...	...	...	...
46	18	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
47	17	...	...	...	...	...	...	...	...	...	1	...	2	1	...	...	...	2	...	...	...	2	3	...	2	...	...	1	1	1	1	1	1	1	...	...	...	...	...	...	...	...	...
48	20	...	...	...	...	...	...	...	...	1	1	1	2	...	1	1	...	...	1	1	1	1	1	...	1	...	...	...	1	1	3	...	2	...	1	...	...	...	...	...	...	...
49	25	...	...	...	...	...	...	...	...	...	...	...	3	1	1	1	...	...	...	1	1	1	2	1	...	...	5	1	1	...	1	1	1	1	1	...	...	...	...	...	...	...
50	30	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	1	1	5	...	1	1	2	3	...	2	1	...	1	...	3	2	...	1	2	...	...	...	...	...	...
51–55	69	...	...	...	...	...	...	...	2	...	1	2	...	2	...	2	1	3	2	1	4	1	2	1	4	2	2	2	3	3	3	1	4	3	3	7	6	1	...	...	...	...	...
56–60	47	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	2	...	2	1	1	2	4	1	3	2	3	5	3	2	6	3	2	2	...	...	...	...
61–65	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	1	...	6	1	1	4	9	3	1	...	...	...	...
66–70	14	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	2	4	1	2	...	...	...	...
71–75	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...
76–79	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	3	1	1	...	...	...
80 & over	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
Not Stated	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Brides	4609	152	460	399	378	414	372	328	284	245	190	183	156	139	100	79	83	59	58	53	47	42	38	30	40	15	29	26	19	26	18	12	26	10	16	29	28	10	9	2	1	....	4

Marriages by Denominations in Towns of Ontario of 5,000 population and over.

DENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES																												
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonities	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists																														
Anglicans	280		150	14	1		1					1				4		48		43	12	2				1			1	2
Baptists	87		14	38					1							2		15		15		2								
Brethren	2				2																									
Christians	2		1			1																								
Christian Science																														
Congregationalists	5			1					3											1										
Disciples	1									1																				
Evangelicals	8										5							2			1									
Friends																														
Greek Church	23		2										16								5									
Holiness Movement	2													1						1										
Jews																														
Lutherans	50		1	2							2					37		3		4	1									
Mennonites	10		1								1					1	7													
Methodists	373		51	20	2				1							3	1	229		50	11	2		2						1
Mormons	3																	1	2											
Presbyterians	312		41	10	1			2	2		2							39		197	18									
Roman Catholics	394		17	1												4		5		10	357									
Salvation Army	7								1									1				5								
Protestants	30		2															1			1			26						
United Brethren	1																			1										
Unitarians																														
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)																														
No religion	3																			1									2	
Other sects	6																	1		1				1					1	2
Total Brides	1,599		280	86	6	1	1	2	8	1	10	1	16	1		51	8	345	2	324	406	11		29		1			4	5

Ages of Bridegrooms and Brides for the Towns of Ontario of 5,000 population and over, 1921.

AGES OF BRIDES.

Ages of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51-55	56-60	61-65	66-70	71-75	76-79	80 & over	Not stated
Under 18	2			2																																							
18	8	2	2	3		1																																					
19	35	3	15	7	3	5	1				1																																
20	60	3	14	19	11	8	2	1	1			1																															
21	124	6	22	27	23	16	10	12	1	2	1		1	1	1	1																											
22	125	5	29	20	18	18	13	8	5	3	4		2																														
23	135	9	13	24	21	23	9	9	16	4	6	1																															
24	124	7	16	15	9	19	15	11	16	7	4	3	1	1																													
25	116	7	13	8	14	16	13	8	11	16	2	4	1	3																													
26	104	5	7	10	12	7	8	15	4	5	15	5	5	4	2																												
27	96	5	6	9	6	8	8	7	9	10	14	7		1	1	2	1	1			1																						
28	88	2	12	9	5	5	8	10	9	5	4	4	7	3	1		1	1				1													1								
29	67	2	2	2	5	6	4	5	5	2	7	4	8	3	4	4	1	1		2																							
30	62	1	2		6	4	6	1	9	3	5	2	2	4	7	3		1	3	1	1					1																
31	53	2	3	2	2	2		5	5	5	4	7	3	4	4	3	2																										
32	40		1	2		5	1	6	3	2	2	3	1	1	2	1	2	1	3			1		1	1					1												
33	33					4	1	5	2	2	3	3	3		2	2		1	1		2	1				1																	
34	31	1		1	2			3	4	2	2	1	2	2	3		2	5		1																							
35	33		3	1		3		1	1	3	2	1	4	3		1	2	3	3	2																							
36	24		1	1	1	3		1	3	2	2	3		1				1			1	1	1		1			1														
37	20				1		1	4	1	2	1	1	1	1		1	1	3			1														1								
38	24		1				1		2	3	1	1	4	1	1	1		1		1		1	2	1					1					1								
39	20		1					1		1	1	2	2	1	1	1				3		1	1	1		1				1	1											
40	16			1			1	1	1	1			1		1		1		2	1	2	2	1																				
41	8												1		1		1	1			1	1			1	1																	
42	18			1					1		1				2	4		1	1			1		1	2	2									1								
43	12			1		1	1	1			1		1			2			1	1							2															
44	7														1				2			1	1		1																	
45	13					1							1		1		1	1	1	2	1			2	1				1													
46	9															1		1						1	1			1	1		2	1										
47	6												1					1			1			1							1											
48	7													1			1					1								1	1	1		1								
49	8										1		1			1		1				1		1			1							1								
50	8								1			1							1							1		1		1							1					1
51-55	18		1											1			1		2	1			2		2	1	2							1	3	1						
56-60	24																			1	1	1	1	2	2			1		3		1		2	1	5	3					
61-65	8						1																					1		1							1	4				
66-70	4																						1												1			1	1				
71-75	5																														1						2	2				
76-79	2																																						2				
80 & over	1																																					1				
Not stated	1																																									1
Total Brides	1599	60	164	165	139	155	104	115	110	80	84	56	52	36	35	28	17	25	20	16	12	15	10	10	13	7	3	5	4	6	6	6	1	4	6	10	7	8	3			2

Marriages by Denominations in the City of Hamilton, 1921.

DENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES																												
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Menonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists																													2	
Anglicans	394		252	13		2					1					3		52		49	19	1							1	1
Baptists	75		13	33	1	1			1							2		6		9	7									
Brethren	7			1	6																1									
Christians	4					1	2														1									
Christian Science	2		1																											
Church of Christ	3							2		1								1		3										
Congregationalists	7			1					2											1										
Disciples	2			1																										
Evangelicals	5		1	1						3																				
Friends																														
Greek Church	28											21						1		1	5									
Holiness Movement																														
Jews	20													19						1										
Lutherans	10		2							1					3			2			2									
Mennonites																														
Methodists	265		55	17					1		1			1	1			135		43	11									
Mormons	1																		1											
Presbyterians	292		56	12		1			3		1							41		165	9	2							1	1
Roman Catholics	193		21	3										1				8		12	147		5	1						
Salvation Army	5																													
Pentecostal																		2						20						
Protestants	23		1																											
Union Church																		1												
United Brethren	1																													
Unitarians																														
Oriental religious (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)																		1											1	
No religion	2																	3		2									9	
Other sects	15		1																											
Total Brides	1,354		403	82	8	6		2	8	1	6		21		21	9		253	1	286	202	8		21					3	13	

Ages of Bridegrooms and Brides for Hamilton City, 1921.

AGES OF BRIDES.

Ages of Bride-grooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 and over	Not stated
Under 18																																											
18	8	1	3	3			1																								..	..											
19	29	3	10	6	7	2	1																								..												
20	62	6	14	13	13	10	2	2	1			1																															
21	105	5	23	23	14	17	9	6	7				1																														
22	90	2	11	11	15	21	11	8	3	6	1		1																														
23	99	1	9	11	16	18	15	12	9	2	3	2					1																										1
24	110		14	9	11	11	17	13	15	5	8	2	1		1				1		1																						
25	96	2	6	7	7	8	17	15	16	7	3	5	2	1																													
26	96	1	6	8	9	14	11	11	3	8	8	5	2	3	3	2		1		1																						
27	86	4	1	7	8	9	8	10	6	5	7	11	3	4	1	1	1																										
28	63	2	3	2	2	1	5	8	6	5	4	5	9	3	4		1	1		1		1																					
29	66	1	2		3	5	3	8	5	6	7	5	8	5	3	3			2																									
30	46		1	2	5	2	1	4	1	4	3	6	3	5	6	1			1	1																								
31	42		2		3	1	7	2	2	3	3	3	3	3	2	3	2	1			1	1																					
32	45	2	1	3	2	3	3	3	2	5	1	2	1		3	3	3	3	1	3						1																	
33	44	3	1		3	4	1	4	2		5	2	7	4	4	1			1					1			1																
34	22		1		1	1		1	2	1	1	1	2	2	3		1	1	1	2									1														
35	27			1	1	2		1	1	1	2	1	4	1	3			2	2	1	2		1	1																			
36	24			1		4	2	1	2	2	1			1					3		3	1		1			2																
37	20					1		1	1	1	1	1	4			3	1			2	2	1							1														
38	19		1				1		1	2			1	1		1	1	2	2	1	2	..		1			1	1															
39	11					1			1	1				1	1	1		1			2			1			1															
40	19									3	3		2	1	1	2		1	2	1	1							1							1								
41	7			1	1				1							1			1		1						1															
42	10															2	1		1	1				1	1		1		2													
43	10								1	1		2	1								2		1				2															
44	8			1								1					1	1		1	1	1	1																			
45	18		1						1				1	1	1			2	1			1		1	1		2		2		1				2							
46	6										1				1				1								1		1		1											
47	3														1			1			1																					
48	6														1					1	1	1					1				1											
49	4																							1				1	2													
50	5																				1		1						1	1	1											
51–55	21											1			1	1		1	1	1	1	1	4		1			2	2	1					2							
56–60	10												1			1					1									1	1			2	2	1					
61–65	7																					1							1		1			2	2			1			
66–70	6																																		2	4					
71–75	3																																		2		1					
76–79	1																														1											
80 & over																																										
Not stated																																	..									
Total Brides	1354	33	110	109	121	135	115	110	89	68	62	56	57	36	40	26	13	18	21	17	23	9	8	8	3	1	11	6	13	3	6	2	..	..	3	10	5	5	..	1	...	...	1

Marriages by Denominations in the City of London, 1921.

DENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES.																												
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists																														
Anglicans	217		130	12												1		33	2	32	5	1								1
Baptists	77		5	45														16		7	2	1		1						
Brethren	1																			1										
Christians																														
Christian Science	1																	1												
Church of Christ	3							2										1												
Congregationalists	5		2						3																					
Disciples																														
Evangelicals																														
Friends																														
Greek Church	2												1								1									
Holiness Movement																														
Jews	2														2															
Lutherans	2																	1			1									
Mennonites	1																				1									
Methodists	185		27	14			1		3									101		31	7	1								
Mormons	2																		2											
Presbyterians	121		19	12			1											25	1	62	1									
Roman Catholics	47		5	1														6		2	33									
Salvation Army	3		1															1				1								
Pentecostal	1																						1							
Protestants	1																	1												
Union Church																														
United Brethren																														
Unitarians																														
Oriental religions (Buddhists, Confucians, Mohammedan Shintos, Sikhs Hindus)																														
No religion	1		1																											
Other sects																														
Total Brides	672		190	84			2	2	6				1		2	1		186	5	135	51	4	1	1						1

Ages of Bridegrooms and Brides for London City, 1921.

AGES OF BRIDES.

Ages of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 & over	Not stated
Under 18																																											
18	5		2		2			1																																		
19	15	2	7	4	2																																					
20	26	3	4	6	6	2	4					1																															
21	70	4	11	11	16	13	8	2	3	1		1																														
22	41	2	5	7	3	9	6	2	2	3		1				1																									
23	56	1	11	4	11	4	9	6	4	2		1	2						1																							
24	45		3	3	6	5	9	4	6	2	1	3		2				1																							
25	47		3	5	1	5	9	6	5	7	4	2																													
26	42		3	4	1	7	7	4	4	4	3	4	1																												
27	40			1	1	5	6	4	7	4	7	4	4	1	3				1	1																					
28	24		3		1	1	1	2	3	1	2	3	1	3	2					1																					
29	25		1		2	3		3	1	4	1	5	2		2		1																							
30	20			1	1	1		2	3	1	3			2	4	1		1																						
31	18					1		2	2		2	1		1	3	3					1	1	1																		
32	17					1		2	1			1	4		2	3	1			2																					
33	18			1		3			1		1	1	1	1	1	3	1	3				1																		
34	12						1	2	2	1	2			1	1	1						1																			
35	18			1	1	1		2		1		1	1	2	1				1		3	2			1															
36	11		1			2	2		1		1		1				1						1			1														
37	9			1			1			1		1	1			1						1	1		1															
38	9									1	1	1	1	1					1	1			2																	
39	4					1											1	1				1																	
40	7											1	1							1		2			1						1								
41	11		1									1	2	1							1	1		1	1	1					1								
42	8								1										1	1	1	2		1						1									
43	5							1									1							1		1		1											
44	1																										1												
45	6			1																2	1					1		1										
46	3												1													1							1						
47	3											1								1						1													
48	2																			1	1																		
49	4				1																										3								
50	3														1													1			1								
51–55	11																		1	1	2			1		2			1	1			1	1					
56–60	13																				1			2			1		3		1		1		3				
61–65	7																																	1		2		3	1		
66–70	4																																	1	1	1		1			
71–75	1																																			1					
76–79	1																																						1		
80 & over	1																																				1			
Total Brides	672	12	55	50	55	64	63	45	46	33	28	34	23	15	20	13	6	9	5	16	7	9	8	3	6	6	1	7	1	2	5	4	4	2	8	5	2				

Ages of Bridegrooms and Brides for Toronto City, 1921.

AGES OF BRIDES.

Ages of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 and over	Not stated
Under 18	4	3				1																																					
18	26	7	14			2	3																																			
19	115	6	34	40	15	10	4	4			1					1																									
20	185	10	40	40	48	17	11	8	5		3			1	1								1																		
21	446	15	81	93	66	83	50	28	14	8	2	3	1	1																												1
22	419	12	41	72	59	63	81	29	20	18	1	10	4	3	1	1	1		1	1			1																			
23	413	7	39	46	67	55	76	58	36	8	12	3	2	1		1	1	1																							
24	432	7	24	31	55	60	54	52	66	36	12	15	11	2	2		1	1	2																						1
25	456	7	21	35	42	44	44	57	69	44	29	29	10	6	10	2	2	1		2				1																	1
26	463	7	15	28	32	55	42	55	50	54	53	25	18	10	7	5	2	1	2		1						1														
27	420	5	14	23	28	29	49	48	43	40	44	41	24	11	7	4	6	1				2																			1
28	360	4	9	7	17	24	28	44	39	30	38	30	35	19	11	7	6	4	3	2			1	1																	1
29	332	1	5	13	15	20	16	35	28	37	33	29	23	38	15	7	6	3	3	3	1		1																		
30	294	2	6	5	14	14	28	22	20	27	32	26	31	21	12	14	10	2	1	1	3				1		1			1										
31	229	1	2	5	8	12	13	14	13	16	28	18	19	19	17	10	6	8	6	7	2	2		2			1														
32	206		3	6	3	5	11	13	11	15	20	10	20	7	16	12	15	9	12	8	5	1	2	1				1													
33	150			1	2	9	6	6	10	11	15	12	8	10	9	6	8	11	10	5			3	3	1	1	2								1						
34	139		2	1	2	7	5	8	12	4	7	11	7	9	11	4	11	9	5	4	8	6	1	2			1			2											
35	155		1	4	4	6	4	3	8	10	8	6	9	13	12	10	10	9	9	10	4	1	5	1	4		1	1		2											
36	94		2	1		1		3	7	7	9	7	5	6	5	8	6	4	5	5	4	2		3	2								1							1
37	104		2		2	2	4	4	4	5	9	7	4	4	8	3	9	8	10	2	1	8	3	2				1		1	1										
38	105			1	1	6		5	5	6	4	5	15	4	7	4	4	5	2	4	5	3	6	3	6		2	1					1							
39	81			1		3		3	1	2	3	3		7	9	5	5	5	5	6	6	1	2	9	1		1	1	1			1								
40	91			2	1	2	5	2	4	1	4	1	9	2	4	5	3	2	6	6	7	3	8	4	6	2			1					1						
41	47				1	1		1		1	4	3	3	3	2	2	2	1	6	1	3	2	2	2	1	3	2	1												
42	65			1			1	1			2	1	2	1	3	6	2	3	6	4	3	3	6	1	4	2	6	3		1			1		1	1					
43	34			1				2		1	1	2	1	3		3	3	1	1	2	2	1	2	1	1		3	1		1	1									
44	35					1		1	1	1	2			1		1	3	1	3	3	3	1		2	2	3	1	1	3			1									
45	45				1	1	1							1	1		1	1	1	4	2	2	1	2	4	1	4	7	4	5											
46	29				1			1				1			1	3		1	2	1	4	2	2	2	4		2	1			1									
47	41						1	1		1	1		1	1	1	1	2		1	2	3	1	3	3	3	1	1	2	3	1	1		2		1					
48	36				1	1				1			2	1	3	1		1	1		1		3	1	1	4	1		1	2	4		4		2					
49	25								1				1		1	1	1			1		1	1				1	4	2	1			2	1	1	1	3				
50	27				1				1		1		1		1				1		2	4	2	1	2			2	1	1	3				1	2					
51–55	84							1	2	2				2	3	3	1	3	3	3	2	3	1	2	3	6	6	2	3	3	4	4	5	2	10	5					
56–60	65			1						1			1						2	2	1	1	2	3		3	3	3	1	3	2	6	1	4	4	3	13	5				
61–65	30								1															1	1		1		2	1		1	1		6	4	5	4	2			
66–70	15														1										1	1					2		2		3	3	2				
71–75	7																											1			1					3		1			
76–79	2		1																																	1					
80 & over	2																																			1	1				
Not stated	1																																								1
Total Brides	6309	94	356	458	486	534	537	509	471	387	378	299	267	205	180	130	129	96	109	88	74	50	64	50	49	27	40	33	23	26	23	9	18	14	16	37	26	7	3				7

Marriages by Denominations in the City of Toronto, 1921.

ENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES.																												
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonities	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists	2	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Anglicans	1,943	1	1,317	57	2	1	3	1	8	2	. .	. .	. .	. .	1	3	. .	182	. .	276	72	2	. .	2	. .	1	. .	. .	10	2	. .
Baptists	372	. .	65	184	. .	1	. .	1	3	. .	. .	. .	. .	. .	. .	. .	. .	49	1	59	7	1	. .	. .	. .	. .	. .	. .	1	. .	. .
Brethren	11	. .	. .	. .	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	1	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .
Christians	15	. .	1	1	. .	10	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Christian Science	17	. .	6	. .	. .	. .	6	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	3	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Church of Christ	3	. .	1	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Congregationalists	52	. .	14	2	. .	. .	. .	. .	15	. .	. .	. .	. .	. .	. .	. .	. .	10	. .	10	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Disciples	7	. .	1	1	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	1	. .	2	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .
Evangelicals	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Friends	3	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Greek Church	75	. .	8	. .	. .	. .	. .	. .	. .	. .	. .	. .	55	. .	. .	1	. .	2	. .	3	4	. .	. .	1	. .	. .	. .	. .	. .	1	. .
Holiness Movement	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Jews	273	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	265	. .	. .	2	. .	2	2	. .	. .	. .	. .	. .	. .	. .	1	. .	. .
Lutherans	33	. .	3	2	. .	. .	1	. .	. .	. .	. .	. .	1	. .	. .	12	2	6	. .	5	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Mennonites	3	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Methodists	1,180	. .	245	56	1	. .	3	. .	6	1	. .	2	. .	. .	1	2	. .	638	. .	181	39	3	. .	. .	. .	. .	. .	2	. .	. .	. .
Mormons	9	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	1	5	1	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Presbyterians	1,484	2	322	54	4	1	. .	. .	5	2	. .	. .	. .	. .	. .	5	. .	184	. .	855	42	4	. .	. .	. .	. .	. .	. .	3	1	. .
Roman Catholics	693	. .	68	11	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	3	. .	30	. .	43	526	. .	. .	10	. .	. .	. .	. .	1	. .	. .
Salvation Army	34	. .	2	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	1	. .	28	. .	. .	. .	. .	. .	. .	. .	. .	. .
Pentecostal	5	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5	. .	. .	. .	. .	. .	. .	. .	. .
Protestants	59	. .	4	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	3	. .	3	2	. .	. .	46	. .	. .	. .	. .	. .	. .	. .
Union Church	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
United Brethren	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .
Unitarians	1	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
No religion	11	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	1	. .	. .	. .	. .	. .	. .	. .	7	. .	. .
Other sects	21	. .	1	1	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	14	. .
Total Brides	6,309	4	2,065	371	16	13	13	3	39	6	. .	4	57	. .	267	26	3	1,117	6	1,449	701	39	6	59	. .	2	2	. .	23	18	. .

Ages of Bridegrooms and Brides for Ottawa City, 1921.

AGES OF BRIDES.

Ages of Bridegrooms	Total grooms	Under 18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51–55	56–60	61–65	66–70	71–75	76–79	80 and over	Not stated
Under 18	2		1	1																																							
18	3			3																																							
19	13	3	5	4		1																																				
20	28	4	4	5	6	2	4	1	1			1																														
21	72	6	8	15	16	13	6	3	1	1		1						1				1																				
22	63	1	7	6	12	7	14	10	2	2	1	1																														
23	73	4	5	10	8	13	13	7	3	2	2	2		2	2																											
24	69	4	12	4	10	8	7	9	7	4	3			1																												
25	91	1	4	3	8	13	10	7	15	11	5	5	3	1	1		2																									
26	77	3	4	10	5	4	7	14	1	8	5	6	6	1	2		1																									
27	86	2	3	2	3	6	7	9	12	11	8	9	7	3	1			1	2																							
28	60		1	2	3	3	3	7	5	6	6	3	11	6	2		1	1																								
29	78	2		5	3	7	5	7	8	10	9	6	4	5	1	3	1	2																								
30	68		2	2	5	2	5	7	9	6	5	6	6	1	3			2		1	3		1		1	1																1
31	39		1	1	2	5		3	4	4		7	3	1	4	2						1	1																			
32	33				1	1	3	2		2	7	2	4	3	2	2	1	2					1																			
33	33					1	2	1	3	4	6	1	3	1	2	1	2	1	2	1	1				1																	
34	30		1			1	1	4	7	1	2			3	1			2	1	1	1		1			1	1															
35	28				2			1	2	1	2	2	2	5	1	2	1		1	4	1		1																			
36	13						1		2	1	1	1	1			1		2	1	1	1																				
37	24					1		1		1	3	2	1		3	1	4	1			1	3		1					1												
38	15						1						2	1	1	1	1	1	1			2	1	1		1		1													
39	16							1		1	1	1	1	1	1		1	1		1	2		2	1	1																
40	13				1					1	1		1	1	1	1	1				1	1		1	1										1						
41	13				2					1	1		1	1			2			1					1	1		1		1			1								
42	20		1				1					1	1	2	1	3		2		2	1	1	1				1		1							1					
43	8								1											1		1		2		1		1					1							
44	3																			1	1			1																
45	9									1	1	1						1			2				1			1		1										
46	7													1			1	1		1	1					2														
47	2									1				1																										
48	3																										1		1		1									
49	4																	1											1			1								
50	2																				1				1															
51–55	15							1								2			1				2	1	1			1			3	1		2					
56–60	15												1		1		1	1	1				1						1	2		1		1	3	1			
61–65	5				1																										1	1			1		1		
66–70	8																						1							2					4	1			
71–75	4																									1						1				1	1		
76–79	3													1																					1		1		
80 & over																																							
Not stated	1																																						1
Total Brides	1149	30	59	73	90	88	90	95	83	80	69	58	58	42	30	19	20	23	10	15	17	10	11	10	8	6	4	5	4	6	1	6	3	2	2	12	5	3				2

Marriages by Denominations in City of Ottawa, 1921.

DENOMINATIONS OF GROOMS	Total Grooms	DENOMINATIONS OF BRIDES.																														
		Adventists	Anglicans	Baptists	Brethren	Christians	Christian Science	Church of Christ	Congregationalists	Disciples	Evangelicals	Friends	Greek Church	Holiness Movement	Jews	Lutherans	Mennonites	Methodists	Mormons	Presbyterians	Roman Catholics	Salvation Army	Pentecostal	Protestants	Union Church	United Brethren	Unitarians	Oriental religions	No religion	Other sects	No.
Adventists																														1	
Anglicans	240		141	4					3							3		23		44	21										
Baptists	26		4	10			1									1		2		5	3										
Brethren	1				1																										
Christians																															
Christian Science	1				1																										
Church of Christ																															
Congregationalists	8		2	1					2									2			1										
Disciples																															
Evangelicals																															
Friends																				1	2										
Greek Church	6												3																		
Holiness Movement	2								1					1																	
Jews	22														22																
Lutherans	13		2													11															
Mennonites																															
Methodists	144		28	7										1				49		20	8						1				
Mormons	1																		1												
Presbyterians	230	1	40	9			1									1		31		123	21		3								
Roman Catholics	473		14	3					1							1		2	1	15	436										
Salvation Army																															
Pentecostal	3																			1			3								
Protestants	6																							5							
Union Church																															
United Brethren																															
Unitarians																															
Oriental religions (Buddhists, Confucians, Mohammedans, Shintos, Sikhs, Hindus)																															
No religion	3																			1	1								1		
Other sects																															
Total Brides	1,149	1	231	34	2		2		7				3	2	22	17		109	2	210	493		6	5			1		1	1	

CAUSES OF DEATH IN THE DISTRICT OF ALGOMA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**259**	**69**	**5**	**4**	**4**	**4**	**10**	**9**	**8**	**18**	**19**	**17**	**24**	**24**	**29**	**14**	**1**	**158**	**101**	.....	**215**	**18**	**14**	**12**	**150**	**80**	**27**	.....	**2**	**20**	**35**	**19**	**18**	**23**	**15**	**17**	**24**	**32**	**19**	**14**	**23**
I.—Endemic, Epidemic and Infectious Diseases																																							
Group Total	48	3	2	4	2	..	6	5	2	6	6	4	3	1	3	..	1	28	20	...	46	...	1	1	35	13	...	...	...	3	6	7	3	4	1	1	5	9	4	2	3
1A. Typhoid fever	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
6. Smallpox	2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	2	...	...	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
7. Measles	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
8. Scarlet fever	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
10. Diphtheria	10	...	...	1	1	...	3	3	1	1	...	...	...	...	...	...	...	6	4	...	10	...	...	...	10	...	...	...	...	1	...	2	...	...	...	...	...	5	2	...	...
11A. Influenza, with pneumonic complications specified	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
11B. Influenza, without pneumonic complications specified	1	...	...	...	..	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
13. Mumps	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
16C. Dysentery, due to other causes or of unspecified origin	3	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...
31. Tuberculosis of the respiratory system	22	1	...	1	...	...	1	2	1	4	3	3	3	...	2	...	1	9	13	...	20	...	1	1	14	8	...	...	...	...	3	4	3	3	1	...	1	2	2	1	2
34. Tuberculosis of the vertebral column	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...	...	2	...	...	...	1	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
35. Tuberculosis of the joints	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Total deaths from tuberculosis	25	1	...	1	...	...	1	2	1	4	5	3	3	1	2	...	1	12	13	...	23	...	1	1	16	9	...	...	...	...	4	4	3	3	1	1	2	2	2	1	2
38E. Syphilis, stage not indicated	1	...	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
II.—General Diseases.																																									
Group Total	21	...	2	...	...	...	...	2	1	...	1	3	3	5	3	1	..	11	10	...	20	1	...	...	6	12	3	...	...	...	5	3	...	...	4	...	5	2	1	...	1
43. Malignant tumors of the buccal cavity	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	2	...	...	2	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...
44. Malignant tumors' stomach and liver	4	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	3	1	...	4	...	...	...	...	3	1	...	...	...	1	...	...	...	1	...	1	...	1	...	...
45. Malignant tumors, peritoneum, intestines and rectum	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
46. Malignant tumors, female genital organs	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
47. Malignant tumors, breast	2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...
49. Malignant tumors, of other or unspecified organs	3	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	3	...	...	3	...	...	...	...	2	1	...	...	...	1	1	...	...	...	...	...	...	...	...	1
Total deaths from cancer	13	...	...	...	...	...	...	...	...	...	...	3	3	3	3	1	...	8	5	...	12	1	...	...	...	10	3	...	...	...	4	1	...	...	1	...	4	1	1	...	1

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
51. Rheumatic fever	1							1										1			1				1									1							
56. Rickets	1		1																1		1				1						1									
58A. Pernicious anaemia	2										1			1					2		2					2							1			1				
60A. Exophthalmic goitre	1													1					1		1				1					1									
60B. Other diseases of the thyroid gland	1								1									1			1				1										1				
65A. Leukaemia	1							1											1		1				1									1					
69. Other general diseases	1		1															1			1				1						1								
III.—Diseases of the Nervous System																																								
Group Total	12	4				1					1		1		4	1		7	5		9	2	1		5	4	3				1	1	1	1	1		1	2	1	1	2
74A. Cerebral haemorrhage, Apoplexy	4										1				2	1		1	3		1	2	1			1	3								1		1		1	1
75A. Hemiplegia	1												1						1		1					1													1	
78. Epilepsy	1					1													1		1				1												1			
80. Infantile convulsions (under 5 years of age)	4	4																4			4				4					1		1	1				1		
82B. Neuritis	1														1			1			1					1										1			
84. Other diseases of the nervous system	1														1			1			1					1					1								
IV.—Diseases of the Circulatory System																																							
Group Total	23						1				1	2	5	5	7	2		17	6		17	5	1		4	12	7			2	1	3	3	1		1	2	1	4	2	3
88. Acute endocarditis and myocarditis	4						1					1	2					4			4				2	1	1			1						1		1		1
89. Angina pectoris	1												1					1			1					1													1
90. Other diseases of the heart	15											1	1	4	7	2		9	6		10	5			2	7	6			1		3	2	1		1		1	3	2	1
91B. Arteriosclerosis	3										1		1	1				3			2		1			3				1		1				1				
V.—Diseases of the Resiratory System.																																							
Group Total	36	14			1	1		2	2	1	1	3	7	3	1			22	14		34		1	1	21	11	3		1	5	3	2	5	5	2	1	1	4	1	2	5
99A. Bronchitis, acute	2	2																	2		2				2						1			1						
99B. Bronchitis, chronic	4													2	2			1	3		4				2	1	1			1			1	1		1				
99C. Bronchitis, not otherwise defined (under 5 years of age)	1	1																	1						1		1						1							
99D. Bronchitis, not otherwise defined, (over 5 years of age)	1														1			1			1						1					1								
100A. Broncho-pneumonia	10	7			1					1			1					7	3		10				8	1	1			2		1	2			1		1			3
101A. Pneumonia lobar	2								1				1					2			2				1	1							1						1		
101B. Pneumonia, not otherwise defined	13	4				1			1		1	1	1	3		1		10	3		11		1	1	7	5			1	3	1	1	1	2	1			1		1	2
102. Pleurisy	1													1					1		1					1												1			
105. Asthma	2									1				1				1	1		2					2												1	1		

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ALGOMA—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIV.—External Causes.																																									
Group Total	30					1	2	2	3	7	5	5	2	1	2			23	7		17	3	7	3	18	9	3				4		2	7	5	5	3	2	1		1
170. Suicide by firearms	1									1								1					1		1											1				
178. Conflagration	1														1				1		1					1				1									
182. Accidental drowning	15						1	2	1	2	4	4	1					12	3		8	1	4	2	8	5	2						1	6	5	2					1
183. Accidental injury by firearms (war casualties excepted)	3								1				1		1			3			2	1			1	1	1									1	1	1			
Other forms of crushing (vehicles, railways, landslides, etc.	5					1			1	1	1	1						3	2		3		1	1	5					1		1		1			1	1		
188A. Railroad accidents	1								1									1					1		1					1										
188C. Automobile accidents	2					1				1									2		2				2											1		1			
188F. Other accidental injuries by crushing, etc	2										1	1						2			1			1	2							1						1		
189. Injury by animals (poisoning excepted)	1													1				1				1				1									1					
193. Excessive cold	1									1								1					1			1				1										
201c. Fracture (cause not specified)	1						1												1		1				1								1							
202. Other external violence	2									2								2			2				2					1					1					
XV.—Ill-defined Diseases.																																								
Group Total	11	5				1					1		4					8	3		8	1	2		6	5				3	3		1					1	1	2
205A. Cause of death unstated or ill-defined	11	5				1					1		4					8	3		8	1	2		6	5				3	3		1					1	1	2

CAUSES OF DEATH IN THE COUNTY OF BRANT, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	202	26	4	3	2	.	7	4	3	9	5	10	22	31	42	34	.	101	101	.	158	34	5	5	68	74	60	.	.	22	20	28	19	19	17	14	14	11	13	18	7
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	24	5	1	.	.	.	.	1	1	8	2	3	1	1	1	.	.	12	12	.	20	3	1	.	13	10	1	.	.	2	2	3	3	1	2	4	3	2	1	1	.
9. Whooping cough	5	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	1	.	5	.	.	.	5	.	.	.	.	.	.	1	.	1	.	1	1	1	.	.	.
11b. Influenza, without pneumonic complications specified	3	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	1	2	.	3	.	.	.	1	1	1	.	.	.	.	.	1	.	2	.	.	.	.	.	.
31. Tuberculosis of the respiratory system	15	.	.	.	.	.	.	1	.	8	2	3	.	1	.	.	.	7	8	.	11	3	1	.	6	9	.	.	.	2	2	2	2	.	.	3	2	1	1	.	.
32. Tuberculosis, meninges and central nervous system generally	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Total deaths from tuberculosis	16	1	.	.	.	.	.	1	.	8	2	3	.	1	.	.	.	7	9	.	12	3	1	.	7	9	.	.	.	2	2	2	2	.	.	3	2	1	1	.	.
II.—General Diseases.																																								
Group Total	18	1	.	.	.	.	1	.	.	.	1	.	2	6	5	2	.	4	14	.	14	2	1	1	4	8	6	.	.	2	2	3	3	2	2	.	1	.	3	.	.
44. Malignant tumors, stomach and liver	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	1	.	1	1	.	.	.	1	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.
45. Malignant tumors, female genital organs	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.
47. Malignant tumors, breast	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
48. Malignant tumors, skin	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	1	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.
49. Malignant tumors of other or unspecified organs	5	.	.	.	.	.	.	.	.	.	.	.	1	3	1	.	.	2	3	.	3	1	1	.	2	2	1	.	.	.	1	.	.	1	1	.	1	.	1	.	.
Total deaths from cancer	10	.	.	.	.	.	.	.	.	.	.	.	1	5	2	2	.	3	7	.	7	2	1	.	2	4	4	.	.	2	1	1	.	2	2	.	1	.	1	.	.
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
57. Diabetes	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.

BRANT—Continued.

Number of Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
58A. Pernicious anaemia	3												1		2				3		3					2	1			1	1							1		
60A. Exophthalmic goitre	2										1			1					2		1			1		2												1		
69. Other general diseases	1	1																1			1				1							1									
III.—Diseases of the Nervous System.																																								
Group Total	22			1			2			1			2	3	11	2		13	9		18	3		1	4	10	8			2	2	5		1	3	1	1	1	4	1
71A. Meningitis	1			1															1		1				1							1								
73. Other diseases of the spinal cord	3									1			1	1				2	1		3				1	2				1	2									
74A. Cerebral haemorrhage Apoplexy	13													2	10	1		6	7		11	1		1		6	7			1	1	2		1	3	1	1		2	1
75B. Other forms of paralysis	2														1	1		2			1	1				2											1	1		
79. Convulsions (non-puerperal; 5 years and over)	2						2											2			2				2					1								1	
82B. Neuritis	1												1					1				1					1											1	
IV.—Diseases of the Circulatory System.																																								
Group Total	37						1					1	2	11	13	9		22	15		27	8	1	1	4	11	22			2	3	2	7	7	4	4	1	2	3		2
87. Pericarditis	1														1			1				1					1						1							
90. Other diseases of the heart	28						1					1	2	9	10	5		16	12		23	5			3	10	15			2	2	2	6	5	1	3	1	2	2		2
91B. Arteriosclerosis	8													2	2	4		5	3		4	2	1	1	1	1	6				1			2	3	1			1		
V.—Diseases of the Respiratory System.																																								
Group Total	30	5		1			1	1	2		1		6	6	3	4		11	19		24	5	1		11	13	6			4	6	7	3	3	1			1		5	
99A. Bronchitis, acute	1													1					1		1						1						1							
99D. Bronchitis, not otherwise defined (over 5 years of age)	3												1			2		1	2		2	1				2	1				1		1					1	
100A. Broncho-pneumonia	3	2											1					1	2		2	1			2		1			1	1							1	
101A. Pneumonia lobar	2								1				1					1	1		2				1	1					1							1	
101B. Pneumonia, not otherwise defined	19	3		1			1	1	1		1		3	4	3	1		8	11		16	2	1		8	9	2			4	5	4	2	1				1		2	
105. Asthma	2													1		1			2		1	1				1	1							1	1					
VI.—Diseases of the Digestive System.																																							
Group Total	9	1	2		1		1				1	2		1				5	4		8	1			6	2	1			2	2			1			1	1	2	
111A. Ulcer of the stomach	1											1						1				1				1								1						
111B. Ulcer of the duodenum	1											1						1			1					1												1		
112. Other diseases of the stomach (cancer excepted)	1										1								1		1				1					1										

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BRANT—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
182. Accidental drowning	2			1			1											2			1	1			2												2				
183. Accidental injury by firearms (war casualties excepted)	1												1					1					1			1														
185. Accidental injury by fall	1												1					1			1					1												1			
Other forms of crushing (vehicles, railways, landslides, etc.)	5							1				1	2			1		3	2		4	1			1	3	1			2				1				1		1
188c. Automobile accidents	2							1				1							2		1	1			1	1												1		1
188f. Other accidental injuries by crushing, etc	3												2			1		3			3					2	1			2			1						
194. Excessive heat	1												1					1				1			1										1					
195. Lightning	1						1												1		1				1										1					
201c. Fracture (cause not specified)	1													1				1			1					1										1				
XV.—Ill-Defined Diseases.																																								
Group Total	6	1	1									1		2	1			4	2		5	1			3	2	1					1		1	2	1			1		
204. Sudden death	3		1									1		1				2	1		3				2	1					1			1				1		
205a. Cause of death unstated or ill-defined	3	1												1	1			2	1		2	1			1	1	1						1	1	1					

CAUSES OF DEATH IN THE COUNTY OF BRUCE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**501**	**87**	**5**	**7**	**2**	**2**	**5**	**6**	**6**	**21**	**21**	**27**	**42**	**69**	**93**	**107**	**1**	**253**	**248**	....	**351**	**113**	**30**	**7**	**179**	**197**	**124**	....	**1**	**55**	**54**	**32**	**47**	**40**	**28**	**43**	**45**	**35**	**42**	**36**	**44**
I.— Endemic, Epidemic and Infectious Diseases.																																								
Group Total	47	3	..	2	1	..	2	1	1	10	9	6	6	4	2	..	..	22	25	...	46	1	..	..	20	27	..	..	..	2	3	4	5	4	3	5	4	4	3	5	5
1A. Typhoid fever	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	...	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1
7. Measles	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	...	2	..	..	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
10. Diphtheria	4	..	..	1	1	..	1	..	..	1	..	..	..	..	..	..	..	2	2	...	4	..	..	..	3	1	..	..	..	..	..	..	..	..	..	1	1	..	1	1
11B. Influenza, without pneumonic complications specified	5	..	..	..	..	..	..	..	..	..	2	..	1	1	1	..	..	2	3	...	5	..	..	..	..	5	..	..	..	..	2	..	1	..	..	..	1	..	1	..
16C. Dysentery, due to other causes or of unspecified origin	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
25. Purulent infection, septicaemia	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	1	...	2	..	..	..	1	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	24	..	..	..	..	1	..	1	6	7	4	3	2	..	..	..	..	11	13	...	23	1	..	..	9	15	..	..	..	2	..	2	3	4	2	2	3	2	1	1	2
32. Tuberculosis, meninges and central nervous system generally	3	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	2	1	...	3	..	..	..	3	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1
36D. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	...	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	28	1	..	1	..	..	1	..	1	7	7	4	4	2	..	..	..	13	15	...	27	1	..	..	13	15	..	..	..	2	1	4	3	4	2	2	3	2	1	1	3
38D. Syphilis, hereditary	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
38E. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
II.—General Diseases.																																								
Group Total	69	2	..	1	..	..	..	1	..	..	2	10	11	19	16	7	..	34	35	...	48	15	5	1	16	39	14	..	..	7	8	5	6	5	6	5	6	3	9	3	6
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..
44. Malignant tumors, stomach and liver	11	..	..	..	..	..	..	..	..	..	..	2	4	5	..	..	..	7	4	..	9	2	..	..	1	8	2	..	..	2	..	1	..	3	..	1	1	..	1	1	1
45. Malignant tumors, peritoneum, intestines and rectum	6	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	5	1	..	2	1	3	..	2	3	1	..	..	1	..	..	..	..	2	1	..	..	2	..	..
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..
47. Malignant tumors, breast	3	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	3	..	3	..	..	..	..	2	1	..	..	1	..	..	..	..	..	..	..	1	..	1	..

BRUCE—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
49. Malignant tumors of other or unspecified organs	15											3	1	7	3	1		6	9		9	5		1	3	9	3			1	4	1	2					1	3	1	2
Total deaths from cancer	39											5	6	15	9	4		20	19		27	8	3	1	6	25	8			5	5	3	2	3	2	2	1	2	8	3	3
50. Benign tumors, and tumors not returned as malignant (tumors of female genital organs excepted)	1														1			1				1				1														1
51. Rheumatic fever	2							1						1				1	1		2				1		1		1				1							
52. Chronic rheumatism, osteo-arthritis, gout	4													1	2	1		3	1		2	2				4							2		1		1		
56. Rickets	1	1																1			1				1							1								
57. Diabetes	6			1								1	1		2	1		3	3		3	2	1		3	1	2					1			2	2				1
58A. Pernicious anaemia	7										1	2	2	1	1			3	4		7				3	3	1				2	1	1		1		1	1		
58B. Other anaemias and chlorosis	4										1		2			1		1	3		3	1			1	2	1			1			1	1						
60A. Exophthalmic goitre	2													1	1				2		1	1				1	1		1			1								
60B. Other diseases of the thyroid gland	1											1							1		1					1									1					
65A. Leukaemia	1											1							1				1			1														1
69. Other general diseases	1	1																1			1				1															
III.—Diseases of the Nervous System.																																								
Group Total	45	7						2	1		1	3	4	6	13	8		17	28		26	17	2		18	13	14			5	3	2	7	4	2	4	5	3	2	4	4
71A. Meningitis	2	2																2			2				2														2	
71B. Cerebrospinal meningitis	1							1										1			1				1											1				
73. Other diseases of the spinal cord	1												1					1				1				1									1				
74A. Cerebral haemorrhage apoplexy	21											2	2	5	6	6		7	14		9	10	2		5	7	9			3	2	1	3	3		1	2	2	2	1	1
75A. Hemiplegia	4												1		3			1	3		2	2			1	2	1						1		1		1	1			
75B. Other forms of paralysis	8	1									1	1		1	4			3	5		5	3			3	2	3			2	1		2						1	2
77. Other forms of mental alienation	1							1										1			1				1							1								
80. Infantile convulsions (under 5 years of age)	4	4																	4		4				4								1		1	1				1
82B. Neuritis	1															1			1		1						1							1						
84. Other diseases of the nervous system	2								1						1			1	1		1	1			1	1										1	1			
IV.—Diseases of the Circulatory System.																																								
Group Total	73							1	1		1		9	16	22	23		34	39		43	21	7	2	6	36	31			10	6	5	4	4	3	8	7	6	3	6	11
88. Acute endocarditis and myocarditis	2										1			1				1	1		2					2										1				1
89. Angina pectoris	3													1	2			3			1	1	1			3										1	1		1	1
90. Other diseases of the heart	51							1	1				6	10	17	16		23	28		30	14	6	1	5	25	21			6	5	4	2	3	1	4	5	6	2	5	8
91B. Arteriosclerosis	13												2	3	1	7		5	8		7	5		1		4	9			3	1	1			2	3	1		1		1
92. Atheroma and other diseases of the arteries	1														1			1				1			1								1							
93. Embolism and thrombosis (not cerebral)	1													1					1		1						1													

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BRUCE—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	2															2		1	1			2				1	1					1			1						
135. Diseases of the prostate	6														4	2		6			3	3			3	1	2					4							1	1	
VIII.—The Puerperal State.																																									
Group Total	6								1	2	2	1							6		6					6					2	1			1			1		1
143c. Other accidents of pregnancy	1									1									1		1					1												1		
146. Puerperal sepsis	1								1										1		1					1						1								
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1										1								1		1					1					1								
148. Puerperal albuminuria and convulsions	2									1		1							2		2					2									1				1
149. Childbirth (without other explanation)	1										1								1		1					1					1								
IX.—Diseases of the Skin and Cellular Tissue																																								
Group Total	3														2	1		1	2		3					1	2			1		1				1				
151. Gangrene	3														2	1		1	2		3					1	2			1		1				1				
X.—Diseases of the Bones and Organs of Locomotion																																								
Group Total	1													1					1		1					1									1					
157. Diseases of joints (tuberculosis and rheumatism excepted)	1													1					1		1					1									1					
XI.—Malformations.																																								
Group Total	11	11																8	3		11				11						2	1	1	2			1	1	2	1
159a. Congenital malformations not otherwise specified (still-births excepted)	9	9																7	2		9				9						2		1	1			1	1	2	1
159c. Congenital malformations of the heart	2	2																1	1		2				2							1		1						
XII.—Diseases of Early Infancy																																								
Group Total	38	38																23	15		38				38					6	8		1	3	1	4	4	3	3	2	3
160b. Congenital debility, icterus and scleroma	11	11																7	4		11				11					3	4			1		1	2				

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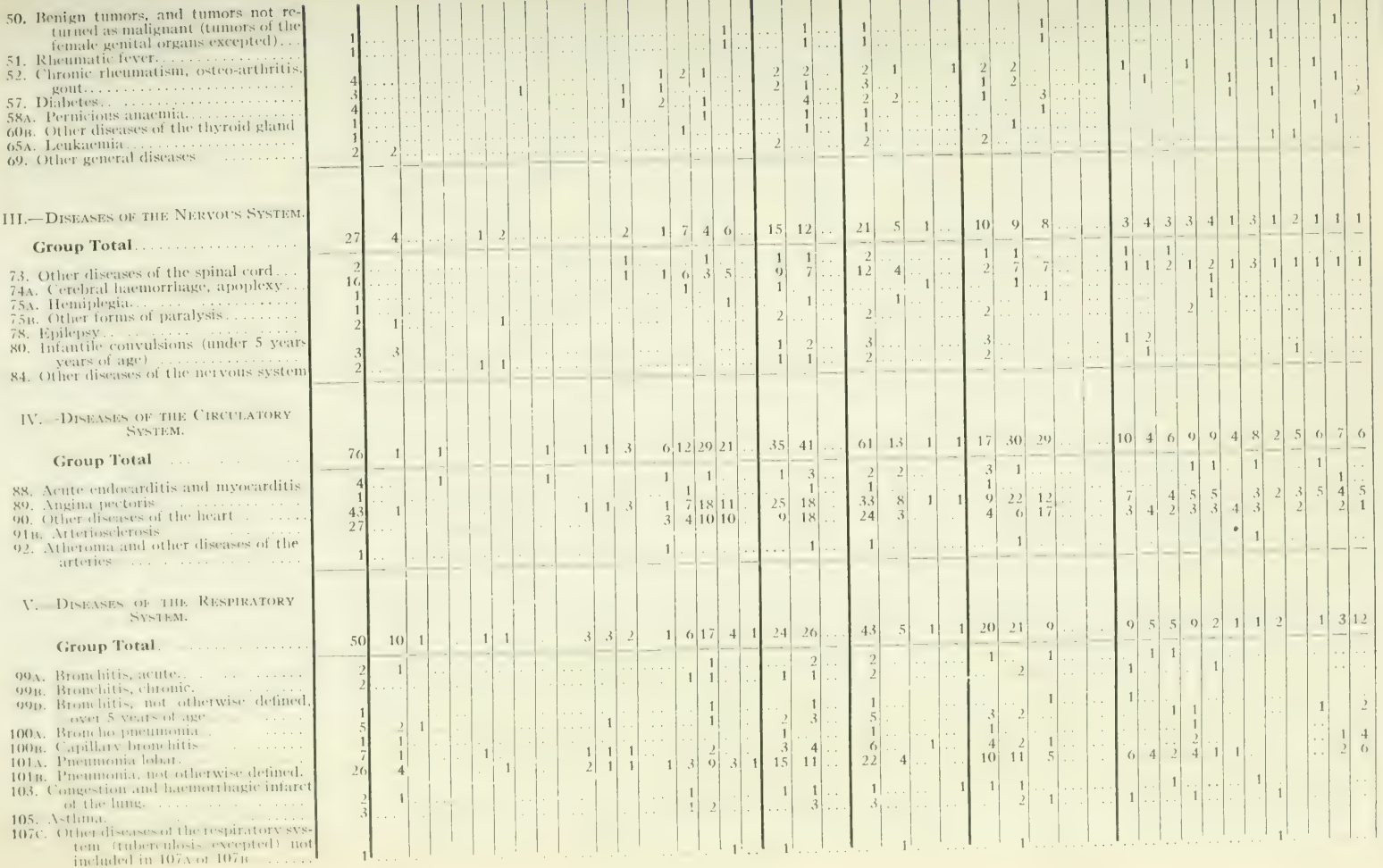
CAUSES OF DEATH IN THE COUNTY OF CARLETON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**330**	**70**	**8**	**2**	**3**	**4**	**7**	**3**	**2**	**20**	**8**	**14**	**23**	**40**	**68**	**57**	**1**	**165**	**165**		**276**	**40**	**7**	**7**	**157**	**106**	**67**			**34**	**22**	**26**	**35**	**30**	**21**	**25**	**20**	**32**	**21**	**27**	**37**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	34	7			2		1			10	2		3	4	3	2		18	16		30	1	1	2	21	11	2			1	2	2	3	5		1	1	9	3	3	4
1A. Typhoid fever	1									1								1			1				1													1			
9. Whooping cough	3	3																2	1		3				3							1	1				1			
10. Diptheria	2				1		1											1	1		2				2										1		1			
11B. Influenza, without pneumonic complications specified	8	2								1				2	1	2		4	4		7			1	5	1	2				1		1	2			2			2
16C. Dysentery, due to other causes or of unspecified origin	4	2			1										1			4			4				3	1									1	2			1
25. Purulent infection, septicaemia	1										1								1			1				1										1				
27. Anthrax	1												1					1			1					1											1			
31. Tuberculosis of the respiratory system	10									6	1		1	2				4	6		8			1	5	5				1			1	2			1	2	2	1
33. Tuberculosis of the intestines and peritoneum	2									2								1	1		2				1	1						1	1						
34. Tuberculosis of the vertebral column	1														1				1		1					1				1									
36E. Tuberculosis of organs, other than the above	1												1						1		1				1											1			
Total deaths from tuberculosis	14									8	1		2	2	1			5	9		12			1	7	7				1	1	1	1	3			2	2	2	1
II.—General Diseases.																																								
Group Total	32	2						1				2	6	6	10	5		16	16		26	5		1	11	11	10			2	1	1	3	2	3		4	2	3	5	6
43. Malignant tumors of the buccal cavity	2														1	1		2			2				1		1					1								1
44. Malignant tumors, stomach and liver	5												1	2	2			3	2		5				2	3							1	1	1		1		1	
45. Malignant tumors, peritoneum, intestines and rectum	2														2			2			2					2								1						1
47. Malignant tumors, breast	2												1			1				2		2				1			1							1			
49. Malignant tumors of other or unspecified organs	4													1	2	1		3	1		2	2			1	1	2						1					1	2
Total deaths from cancer	15												2	3	7	3		10	5		13	2			5	6	4			1		1	2	2	1		1	1	2	4


50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)
51. Rheumatic fever
52. Chronic rheumatism, osteo-arthritis, gout
57. Diabetes
58A. Pernicious anaemia
60B. Other diseases of the thyroid gland
65A. Leukaemia
69. Other general diseases
III.—Diseases of the Nervous System.
Group Total
73. Other diseases of the spinal cord
74A. Cerebral haemorrhage, apoplexy
75A. Hemiplegia
75B. Other forms of paralysis
78. Epilepsy
80. Infantile convulsions (under 5 years of age)
84. Other diseases of the nervous system
IV.—Diseases of the Circulatory System.
Group Total
88. Acute endocarditis and myocarditis
89. Angina pectoris
90. Other diseases of the heart
91B. Arteriosclerosis
92. Atheroma and other diseases of the arteries
V.—Diseases of the Respiratory System.
Group Total
99A. Bronchitis, acute
99B. Bronchitis, chronic
99D. Bronchitis, not otherwise defined, over 5 years of age
100A. Broncho-pneumonia
100B. Capillary bronchitis
101A. Pneumonia lobar
101B. Pneumonia, not otherwise defined
103. Congestion and haemorrhagic infarct of the lung
105. Asthma
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B

CARLETON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	33	13	4	..	1	2	..	1	..	..	..	1	3	3	..	5	..	20	13	..	29	1	1	2	26	4	3	..	..	6	2	1	..	2	..	4	5	6	2	3	2
108A. Diseases of the teeth and gums	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
112. Other diseases of the stomach (cancer excepted)	4	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2	..	1	3	..	2	1	1	..	3	..	1	..	..	2	..	..	..	1	..	..	..	1	..	..
113. Diarrhoea and enteritis (under 2 years)	16	12	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	5	..	15	..	..	1	16	..	..	..	..	1	..	1	..	1	..	3	4	3	..	1	2
114. Diarrhoea and enteritis (over 2 years)	3	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	1	2	..	3	..	..	..	2	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..
117. Appendicitis and typhlitis	2	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..
118A. Hernia	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
122B. Cirrhosis, not returned as alcoholic	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
124. Other diseases of the liver	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
126. Peritonitis of unstated origin	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	1	2	..	2	..	..	1	1	1	1	..	..	..	2	..	..	..	..	..	1	..	..	..	..
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	10	..	..	..	..	..	..	..	..	..	1	3	1	..	1	4	..	5	5	..	6	3	1	..	1	9	..	..	..	1	..	2	..	..	1	..	1	3	..	..	2
129. Chronic nephritis (Bright's Disease)	7	..	..	..	..	..	..	..	..	..	1	1	..	..	1	4	..	4	3	..	4	3	..	..	1	6	..	..	..	1	..	1	..	..	..	..	1	2	..	..	2
132. Calculi of the urinary passages	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	1	..	1	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
139. Benign tumors of the uterus	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
VIII.—The Puerperal State.																																								
Group Total	3	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	3	..	2	1	..	..	..	3	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..
143A. Abortion	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
143C. Other accidents of pregnancy	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
149. Childbirth (without other explanation)	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	..	1	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..
151. Gangrene	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
153. Phlegmon, acute abscess	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
XI.—Malformations.																																								
Group Total	7	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7	..	..	..	7	..	..	..	..	..	1	2	..	..	2	..	1	..	..	..	1
159A. Congenital malformations not otherwise specified (still-births excepted)	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1

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CAUSES OF DEATH IN THE COUNTY OF DUFFERIN, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	Augu-t.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	189	34	2	1	2	1	3	2	2	5	4	8	16	29	49	31	.	100	89	.	158	26	5	.	72	70	47	.	.	18	19	14	26	14	17	9	14	14	17	11	16
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	11	1	.	.	1	.	1	1	1	.	2	2	.	2	.	.	.	4	7	.	11	.	.	.	7	4	.	.	.	.	3	.	1	1	1	.	1	3	.	.	1
5a. Malarial fever	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.
8. Scarlet fever	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
10. Diphtheria	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
11a. Influenza with pneumonic complications specified	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
25. Purulent infection, septicaemia	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
31. Tuberculosis of the respiratory system	4	.	.	.	.	.	.	1	.	.	.	1	.	1	.	.	.	2	2	.	4	.	.	.	2	2	.	.	.	.	2	.	.	.	.	.	1	1	.	.	.
32. Tuberculosis, meninges and central nervous system generally	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37a. Disseminated tuberculosis—acute	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Total deaths from tuberculosis	6	1	.	.	.	.	.	1	.	.	2	1	.	1	.	.	.	2	4	.	6	.	.	.	4	2	.	.	.	.	2	.	1	1	.	.	1	1	.	.	.
II.—General Diseases.																																								
Group Total	23	.	.	.	1	.	.	.	.	2	1	.	3	6	7	3	.	6	17	.	21	2	.	.	.	6	10	7	.	3	3	1	4	3	3	.	1	2	1	2
44. Malignant tumors, stomach and liver	3	.	.	.	.	.	.	.	.	.	.	.	1	.	1	1	.	1	2	.	3	.	.	.	.	.	3	.	.	.	1	.	1	.	.	.	.	.	.	1
45. Malignant tumors, peritoneum, intestines and rectum	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.
47. Malignant tumors, breast	3	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.	.	3	.	3	.	.	.	.	1	2	.	.	1	.	.	.	1	.	.	.	.	.	1
48. Malignant tumors, skin	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.
49. Malignant tumors of other or unspecified organs	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	1	.	2	.	.	.	.	2	.	.	.	1	.	1	.	.	.	.	.	.	.	.
Total deaths from cancer	10	.	.	.	.	.	.	.	.	.	1	.	1	2	3	3	.	2	8	.	9	1	.	.	.	7	3	.	.	2	1	1	2	2	.	.	.	.	.	2
51. Rheumatic fever	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.
52. Chronic rheumatism, osteo-arthritis, gout	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.	.	2	.	.	.	1	1	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.

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DUFFERIN—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
113. Diarrhoea and enteritis (under 2 years)	10	9	1															7	3		10				10						1	1	2			1	1	3			1
114. Diarrhoea and enteritis (over 2 years)	2											1		1					2		2				1	1															1
117. Appendicitis and typhlitis	4							1		1		1		1				1	3		3		1		2	1	1			1				2						1
118A. Hernia	1															1		1			1					1			1											
122B. Cirrhosis, not returned as alcoholic	1														1			1				1				1														
124. Other diseases of the liver	1												1					1			1				1							1						1	
126. Peritonitis of unstated origin	1	1																1			1				1				1										
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1						1											1			1				1				1								1		
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																							
Group Total	3		1												1	1		2	1		2	1			1	1	1							1		1		1	
129. Chronic nephritis (Bright's disease)	1															1		1				1					1								1				
133. Diseases of the bladder	1		1																1		1				1								1					
135. Diseases of the prostate	1														1			1			1					1												1	
VIII.—The Puerperal State.																																							
Group Total	2									1		1							2		1	1			1	1				1		1							
144. Puerperal haemorrhage	1									1									1		1				1														
145c. Other accidents of labor	1											1							1			1				1					1								
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	4													1	2	1		3	1		4				1	2	1			1		1	1				1		
151. Gangrene	2														1	1		1	1		2				1		1												
152. Furuncle	1													1				1			1					1						1				1			
153. Phlegmon, acute abscess	1														1			1			1					1			1										
XI.—Malformations.																																							
Group Total	5	3		1					1									2	3		5				5					2	1						1	1	
159A. Congenital malformations not otherwise specified (still-births excepted)	2	2																	2		2				2					1	1								
159c. Congenital malformations of the heart	3	1		1					1									2	1		3				3												1	1	

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**359**	**35**	**9**	**7**		**4**	**10**	**6**	**7**	**12**	**10**	**16**	**27**	**42**	**95**	**79**		**193**	**166**		**279**	**58**	**15**	**7**	**134**	**133**	**91**		**1**	**35**	**33**	**34**	**29**	**21**	**32**	**19**	**30**	**33**	**39**	**28**	**26**
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	37	2	1	3		3	5	2	2	3	3	1	2	3	6	1		13	24		33	1	2	1	25	7	5			3	2	9	2	1	2	2	1	4	9	2	
8. Scarlet fever	1						1												1		1				1							1								
9. Whooping cough	2	1		1														1	1		1			1	2							1				1			
10. Diphtheria	8					3	3	2										3	5		8				8				1		1						2	3	1	
11A. Influenza with pneumonic complications specified	2												1	1					2		2					1	1											1		
11B. Influenza, without pneumonic complications specified	2	1					1											1	1		2				2						1			1						
13. Mumps	1		..	1		..												1			1				1								..	1						
16C. Dysentery, due to other causes or of unspecified origin	1					..									1			1					1		1												1			
21. Erysipelas	2					..							1		1				2		1	1			1		1			1								1		
23. Encephalitis lethargica	1		1			..													1		1				1									1						
25. Purulent infection, septicaemia	2								1					1				1	1		2				1		1					1						1		
29. Tetanus	1			1															1		1				1								..							
31. Tuberculosis of the respiratory system	14								1	3	3	1		1	5			5	9		13		1		6	6	2			2		3	2	1	1			1	3	1	
Total deaths from tuberculosis	14								1	3	3	1		1	5			5	9		13		1		6	6	2			2		3	2	1	1			1	3	1	
II.—General Diseases.																																							
Group Total	48		1						1	1	1	7	6	10	17	4		21	27		36	9	2	1	9	25	14			2	2	5	5	2	6	4	6	6	5	3	2
44. Malignant tumors, stomach and liver	12												2	4	6			5	7		8	2	1	1	1	5	6				1	1	1		1		3	1	2	1	1
45. Malignant tumors, peritoneum, intestines and rectum	8												2	3	3			3	5	..	8					7	1			1		1			3		2	1		
46. Malignant tumors, female genital organs	1														1				1		1		..	..		1											1			
47. Malignant tumors, breast	2											1			1				2		1	1				2						1					1			
48. Malignant tumors, skin	1														1			1			1					1								1						
49. Malignant tumors of other or unspecified organs	4											1		1	1	1		4			2	1	1		2	1	1			1		1	1	1						

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
101B. Pneumonia, not otherwise defined	16	2	2	1								1	2		6	2		11	5		12	2		2	6	6	4			3	2	6		2						1	2
102. Pleurisy	1															1			1		1				1					1											
103. Congestion and haemorrhagic infarct of the lung	1										1								1		1					1														1
105. Asthma	1															1		1			1						1					1									
VI.—Diseases of the Digestive System.																																									
Group Total	21	7	5				1	1						1	3	3		12	9		20	1			15	4	2			3	1	2	1		2	1	2	4	2	2	1
108B. Other diseases of the buccal cavity and its annexa	1														1			1			1					1				1										
112. Other diseases of the stomach (cancer excepted)	1															1		1			1						1						1							
113. Diarrhoea and enteritis (under 2 years)	10	5	5															6	4		10				10									1						
114. Diarrhoea and enteritis (over 2 years)	2						1									1		2			1	1			1	1					1	1			2	3	2		1	
118B. Intestinal obstruction	1	1																	1		1				1														1	
119B. Other diseases of the intestine	1	1																1			1				1									1						
122B. Cirrhosis, not returned as alcoholic	3														2	1			3		3				1	2			2										1
123. Biliary calculi	1													1					1		1						1		1											
126. Peritonitis of unstated origin	1							1										1			1				1						1									
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	26							1	1		2	2	3	12	5			14	12		20	6			3	13	10			4	4	1	2	1	4	2	1	3	2		2
128. Acute nephritis	3							1						1	1			3			3				2	1			2	1										
129. Chronic nephritis (Bright's disease)	19									1		1	2	2	10	3		8	11		16	3			1	10	8			2	1	1	2	1	4	2	1	3	1		1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1											1						1			1					1														1
133. Diseases of the bladder	2														1	1		1	1			2				1	1				1							1		
135. Diseases of the prostate	1															1		1				1					1				1									
VIII.—The Puerperal State.																																									
Group Total	2										2								2		1			1		2							1	1						
147. Phlegmania alba dolens; puerperal embolism or sudden death in the puerperium	1										1								1		1					1							1							
149. Childbirth (without other explanation	1										1								1					1		1							1							

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CAUSES OF DEATH IN THE COUNTY OF ESSEX, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**515**	**115**	**16**	**7**	**9**	**2**	**14**	**12**	**12**	**20**	**26**	**21**	**40**	**59**	**84**	**74**	**4**	**260**	**255**		**413**	**40**	**47**	**15**	**230**	**191**	**92**		**2**	**59**	**41**	**55**	**42**	**37**	**29**	**50**	**37**	**53**	**46**	**26**	**40**
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	56	12	2	4			6	4	3	7	4	3	1	4	5	1		24	32		48	4	4		38	16	1		1	3	6	7	5	4	3	3	6	6	5	4	4
1A. Typhoid fever	1									1									1				1			1										1				
7. Measles	1	1																1			1				1									1						
8. Scarlet fever	4						2		1	1								2	2		4				3	1				1						2	1			
9. Whooping cough	6	5	1															4	2		6				1							2			1	1	1			1
10. Diptheria	10		1	3			3	3										1	9		9		1		10					1		3		1		3	1	1	
11A. Influenza, with pneumonic complications specified	5	1							1			1		2				1	4		4	1			2	3					3	1						1		
11B. Influenza, without pneumonic complications specified	2									1						1			2		1	1			2							1				1				
16C. Dysentery, due to other causes or of unspecified origin	3	2													1				3		3				2	1								1		2				
21. Erysipelas	1	1																1			1				1								1							
23. Encephalitis lethargica	1						1											1			1				1									1						
25. Purulent infection, septicaemia	2									1					1			1	1		2					2										1		1		
31. Tuberculosis of the respiratory system	14							1		3	4	1	1	1	3			8	6		10	2	2		5	7	1		1	1	3		2		3		1	2		1	1
32. Tuberculosis, meninges and central nervous system generally	1								1									1			1				1												1			
33. Tuberculosis of the intestines and peritoneum	1			1														1			1				1														1
36E. Tuberculosis of the organs, other than the above	1											1							1		1					1								1						
Total deaths from tuberculosis	17			1				1	1	3	4	2	1	1	3			10	7		13	2	2		7	8	1		1	1	2	2		3	1	1	3		1	2
38D. Syphilis, hereditary	1	1																1			1				1							1							
38E. Syphilis, stage not indicated	2	1												1				1	1		2				2								1					1		
II.—General Diseases.																																							
Group Total	57						1	3	1		1	5	10	12	16	8		24	33		48	4	4	1	11	34	12			7	5	7	6	4	5	3	2	3	8	2	5
43. Malignant tumors of the buccal cavity	5												1		1	3		5			4		1			3	2			1	1		1					1		1
44. Malignant tumors, stomach and liver	11											1	1	2	4	3		4	7		10		1			5	6			2	1	1	1	1	2		2			1	

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ESSEX—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	66	19	5	1	5	2	1	1	1	1	2	2	5	5	9	7	..	37	29	..	58	3	4	1	39	20	7	..	..	10	10	12	9	3	1	4	..	5	4	2	6
98 Diseases of the larynx	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
99c. Bronchitis, not otherwise defined, under 5 years of age	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	1	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
99d. Bronchitis, not otherwise defined, over 5 years of age	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	3	..	2	..	1	..	..	2	1	..	..	..	..	1	..	..	..	..	1	..	..	1	..	1
100a. Broncho-pneumonia	13	7	2	1	1	..	..	1	..	..	..	..	..	..	1	..	..	8	5	..	13	..	..	..	12	1	..	..	..	..	2	1	4	..	..	1	..	3	2	..	..
100b. Capillary bronchitis	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
101a. Pneumonia lobar	7	2	1	..	..	..	..	..	..	..	1	1	1	1	..	1	..	5	2	..	6	..	..	1	4	3	..	..	..	2	1	1	..	1	..	1	..	..	..	..	1
101b. Pneumonia, not otherwise defined	31	7	2	..	4	2	1	..	1	..	1	1	2	2	5	3	..	16	15	..	27	2	2	..	18	8	5	..	..	5	6	6	4	1	..	2	..	2	1	..	4
102. Pleurisy	4	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	2	2	..	4	..	..	..	1	3	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..
105. Asthma	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	1	1	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..
107c. Other diseases of the respiratory system (tuberculosis excepted) not included in 107a or 107b	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	2	..	..	..	..	1	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..
VI.—Diseases of the Digestive System.																																									
Group Total	55	25	4	2	1	..	2	1	..	..	3	1	2	5	5	2	2	23	32	..	44	2	7	2	37	12	6	..	..	5	3	1	2	2	2	9	9	12	5	4	1
108a. Diseases of the teeth and gums	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
108b. Other diseases of the buccal cavity and its annexa	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
111a. Ulcer of the stomach	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2	..	2	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
111b. Ulcer of the duodenum	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
112. Other diseases of the stomach (cancer excepted)	4	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3	..	2	..	1	1	2	1	1	..	..	..	..	..	..	1	..	3	..	..	..	..	..
113. Diarrhoea and enteritis (under 2 years)	25	21	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	15	..	23	..	2	..	25	..	..	..	..	3	..	1	1	2	..	2	4	8	1	3	..
114. Diarrhoea and enteritis (over 2 years)	6	..	..	2	..	..	..	..	..	..	..	..	1	1	1	..	1	5	1	..	4	..	1	1	3	2	1	..	..	..	2	..	..	..	..	..	1	2	1	..	..	1
117. Appendicitis and typhlitis	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
118b. Intestinal obstruction	3	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	2	1	..	2	1	..	..	1	2	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..
119b. Other diseases of the intestine	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..
122b. Cirrhosis, not returned as alcoholic	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
123. Biliary calculi	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
124. Other diseases of the liver	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
126. Peritonitis of unstated origin	2	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..

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ESSEX—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
164. XIII.—Old Age.																																									
Group Total	24														4	20		11	13		13	7	4			6	18			4		4	3	2	2	2	1	1	2	2	1
XIV.—External Causes.																																									
Group Total	35		4		2			2	5	6	4	1	1	2	3	3	2	25	10		25	1	7	2	18	14	3			3	3	2	1	5	1	7	5	4	2	1	1
165. Suicide by solid or liquid poisons	1									1								1			1					1					1										
168. Suicide by hanging or strangulation	1							1										1			1				1								1								
179. Burns (conflagration excepted)	3		2		1													1	2		3				3															
182. Accidental drowning	8		1						2		1	1	1				2	5	3		5		1	2	4	4				1			2		4	1			1	
185. Accidental injury by fall	2														1	1			2		2					1	1								1					
187. Accidental injury by machinery	1	1																1			1				1										1					
Other forms of crushing (Vehicles, Railways, Landslides, etc.	8							1	2	3	1			1				8			4	1	3		6	2				1	2					2	1	1		1
188A. Railroad accidents	2								1	1								2			1		1		2					1						1				
188C. Automobile accidents	3							1		1	1							3			1		2		2	1					1						1	1			
188F Other accidental injuries by crushing, etc	3								1	1				1				3			2	1			2	1													1		1
189. Injury by animals (poisoning excepted)	2										1			1				2			1		1			2											1				
196. Electricity (lightning excepted)	1									1								1				1				1							1					1		
201C. Fracture (cause not specified)	8				1				1	1	1				2	2			5	3		6		2		2	4	2			2			2		1	1	1		
XV.—Ill-defined Diseases.																																								
Group Total	10	4									1	1	1	2	1				9	1		6	2	2		5	5			2	1	1	1		1	1	2			1
204. Sudden death	1	1																	1			1				1														
205A. Cause of death unstated or ill-defined	9	3									1	1	1	2	1			8	1		5	2	2		4	5				2	1	1		1	1	2				

CAUSES OF DEATH IN THE COUNTY OF FRONTENAC, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**241**	**42**	**4**	**2**	**2**	**3**	**7**	**1**	**2**	**22**	**16**	**13**	**23**	**33**	**34**	**37**		**122**	**119**	....	**205**	**25**	**6**	**5**	**117**	**79**	**45**	...	...	**27**	**19**	**21**	**19**	**28**	**12**	**25**	**17**	**17**	**16**	**23**	**17**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	49	5	1	2	2	..	1	18	10	3	1	6						32	17	..	44	3	1	1	37	10	2	..	..	8	3	8	2	8	3	5	1	2	1	5	3
1A. Typhoid fever	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
6. Smallpox	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
8. Scarlet fever	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
9. Whooping cough	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
10. Diphtheria	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
11A. Influenza with pneumonic complications specified	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
11B. Influenza without pneumonic complications specified	5	3	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	4	...	5	...	...	...	3	2	...	...	...	2	...	2	...	1	...	...	...	...	...	...
12. Miliary fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16C. Dysentery due to other causes or of unspecified origin	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
25. Purulent infection, septicaemia	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
31. Tuberculosis of the respiratory system	32	...	...	...	...	...	1	...	...	17	9	2	...	4	...	...	...	24	8	...	28	3	1	...	24	6	2	...	...	3	3	4	2	5	3	4	1	1	3	3
32. Tuberculosis meninges and central nervous system generally	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
37A. Disseminated tuberculosis—acute	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Total deaths from tuberculosis	34	1	...	...	...	...	1	...	...	17	9	2	...	4	...	...	...	25	9	...	30	3	1	...	26	6	2	...	...	3	3	4	2	6	3	4	1	1	3	3
38E. Syphilis, stage not indicated	2	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	...	...	1	...	...	1	1	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...
II.—General Diseases																																								
Group Total	25	...	...	...	...	1	...	...	...	...	...	3	10	4	6	1		9	16	..	21	4	..	..	2	17	6	..	..	3	2	1	2	3	3	2	1	2	3	3	..
44. Malignant tumors, stomach and liver	4	...	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...	2	2	...	3	1	...	...	1	3	...	...	...	...	...	1	...	...	...	...	1	1	...	...
45. Malignant tumors, peritoneum, intestines and rectum	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1	...	1	1	...	...	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...
46. Malignant tumors, female genital organs	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	1	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...
47. Malignant tumors, breast	2	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	...	2	...	...	...	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...
49. Malignant tumors of other or unspecified organs	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2	...	...	2	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	1	...	...

FRONTENAC—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Total deaths from cancer	11												4	3	4			5	6		8	3			1	6	4				2	2	1		1	2			1	2	
51. Rheumatic fever	1														1				1		1						1										1				
52. Chronic rheumatism, osteo-arthritis, gout	3												1		1	1		1	2		3					2	1			1					1		1			
57. Diabetes	2												1	1					2		2					2													2	
58A. Pernicious anaemia	4												2					1	3		4					4						2		1					1	
58B. Other anaemias and chlorosis	1												1						1			1				1									1					
65A. Leukaemia	1												1						1		1					1							1							
66. Alcoholism (acute or chronic)	1												1					1			1					1												1		
69. Other general diseases	1					1												1			1				1							1								
III.—Diseases of the Nervous System.																																								
Group Total	27	3					1			1	4	3	1	5	4	5		14	13		22	2	2	1	8	12	7			2			3	6	2	4	2		2	1	5
71A. Meningitis	3	1					1							1				1	2		2	1			2		1			1						1			1	
74A. Cerebral haemorrhage, apoplexy	9												1	1	4	3		4	5		8		1		1	4	4						1	2			1		2		3
75A. Hamiplegia	1													1				1			1					1				1										
75B. Other forms of paralysis	1															1		1			1						1													1
76. General paralysis of the insane	5									1	2	2						3	2		4		1			4	1							2		3				
77. Other forms of mental alienation	3											1		2				2	1		2	1			1	2						1	2							
78. Epilepsy	2											1				1		2			1			1	1	1									1					1
80. Infantile convulsions (under 5 years of age)	2	2																	2		2				2								1		1					
81. Chorea	1												1						1		1				1										1					
IV.—Diseases of the Circulatory System.																																								
Group Total	39									1		3	3	9	14	9		17	22		30	7	1	1	7	20	12			2	4	6	2	3	2	4	3	4	2	5	2
88. Acute endocarditis and myocarditis	3									1			1	1				2	1		3				1	2									2					1
90. Other diseases of the heart	19											1	1	3	10	4		7	12		15	4			2	11	6			2	1	2	2	3		2	1	2	2	1	1
91B. Arteriosclerosis	17											2	1	5	4	5		8	9		12	3	1	1	4	7	6				3	4			2		2	2		4	
V.—Diseases of the Respiratory System.																																								
Group Total	28	8		1			1				2	1	4	3	4	4		10	18		24	2	1	1	21	4	3			5	5	2	4	2	2	3	1		2	2
99.A Bronchitis, acute	1															1			1			1			1								1							
99D. Bronchitis not otherwise defined (over 5 years of age)	4												1		2	1			4		3		1		2	1	1					1	2	1						
100A. Broncho-pneumonia	8	1		1							2	1	1	1		1		5	3		7			1	7	1				3	3				1	1				
101A. Pneumonia lobar	2												1	1				1	1		1	1			1		1									2					
101B. Pneumonia not otherwise defined	11	7					1						1		2			2	9		11				10		1			2	2	2	2		1				1	1
102. Pleurisy	2													1		1		2			2					2													1	1

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FRONTENAC—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIII.—Old Age.																																									
164. Senility total	15														3	12		9	6		10	4	1		1	5	9			4	2	1		2		1	1		1	3
XIV.—External Causes																																									
Group Total	10	1	2					1					1	1		4		8	2		8	2			4	3	3				1		1	1		3		2	2		
165. Suicide by solid or liquid poisons	1												1					1			1					1														
174. Other suicides	1							1										1			1				1															
182. Accidental drowning	1													1				1	1		1					1														
185. Accidental injury by fall	1																				1																			
Other forms of crushing (vehicles, railways, landslides, etc	2		1													1		2			2				1	1					1					1				
188A. Railroad accidents	1		1															1			1				1											1				
188F. Other accidental injuries by crushing, etc	1															1		1			1					1						1								
201C. Fracture (cause not specified)	4		1													3		3	1		2	2			1		3					1	1				1	1	
202. Other external violence	1	1																1			1				1													1		
XV.—Ill-defined Diseases.																																								
Group Total	7	2												4	1			4	3		6			1	3	3	1					1			2	1	1	1	1	
205A. Cause of death unstated or ill-defined	7	2												4	1			4	3		6			1	3	3	1					1			2	1	1	1	1	

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	464	52	9	5	2	3	5	7	5	17	11	27	46	65	111	96	3	251	213		320	93	35	16	152	202	110			41	46	49	40	38	36	32	30	34	42	40	36
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	40	5	2	1	2		2	1	2	6	6	2	3	5	1	2		22	18		38	2			22	17	1			2	7	2	2	3	2	3	3	1	4	6	5
1A. Typhoid fever	5							1		1	2	1						2	3		5				2	3					1				2	2				
6. Smallpox	1												1					1			1					1				1										
7. Measles	3	2						1										2	1		3				3					1	2									
8. Scarlet Fever	2						1			1								1	1		2				1	1					1									1
9. Whooping Cough	3	1	2															1	2		3				3								1					2		
10. Diphtheria	2			1	1													1	1		2				2														2	
11A. Influenza with pneumonic complications specified	2	1													1			1	1		2				1	1							1		1					
11B. Influenza without pneumonic complications specified	4										1		1		2			4			2	2				3	1				1	1						1	1	
21. Erysipelas	2	1												1				1	1		2				2															
25. Purulent infection, septicaemia	1												1					1			1				1										1					
29. Tetanus	2				1		1											2			2				2											1	1			
31. Tuberculosis of the respiratory system	11									3	2	1	1	4				6	5		11				4	7				1	1	1		3		1	1	2		1
32. Tuberculosis of the meninges and central nervous system generally	1								1										1		1				1													1		
35. Tuberculosis of the joints	1											1							1		1					1													1		
Total deaths from tuberculosis	13							1		3	3	1	1	4				6	7		13				5	8				1	1	1		3		1	1		3	1	1
II.—General Diseases.																																								
Group Total	74	2						1		2	6	17	20	19	7			35	39		56	8	7	3	20	39	15			6	11	7	5	7	5	7	4	1	9	6	3
43. Malignant tumors of the buccal cavity	2												1	1				1	1		2					2				1								1		
44. Malignant tumors of the stomach and liver	14												1	7	6			7	7		7	3	2	2	1	7	6			2	1	3	2	1	1		1		1	2	
45. Malignant tumors of the peritoneum, intestines and rectum	7												3	2	1	1		4	3		6	1			2	4	1				3				1	1		1		
46. Malignant tumors of the female genital organs	3														3				3		2		1		2		1				1				2					
47. Malignant tumors of the breast	2													1	1				2		1		1			1	1									1	1			

GREY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
48. Malignant tumors of the skin	2													1		1			2		2					1	1						1		1					
49. Malignant tumors of other or unspecified organs	10												2	4	4			6	4		8		2		5	5				2	1	1	1	1	2			1		
Total deaths from cancer	40											1	7	16	14	2		18	22		28	4	6	2	10	20	10			4	6	5	3	3	3	6	1	2	4	3	
51. Rheumatic fever	2													1		1		1	1		2					1	1										1		1
52. Chronic rheumatism, osteo-arthritis, gout	4												2		1	1		1	3		3	1			1	3						1	1		1				1
57. Diabetes	9						1			2		2	1	1	1	1		4	5		8	1			4	5			1	1	1		1				2	2	1	
58A. Pernicious anaemia	8	1										1	5	1				6	2		7		1		2	6			1	2		1		1	1				1	1
58B. Other anaemias and chlorosis	5													1	2	2		2	3		4	1			1	1	3				1		2	1					1	
60A. Exophthalmic goitre	3											1	2					1	2		3					3				1					1		1			
60B. Other diseases of the thyroid gland	1														1				1		1						1								1					
69. Other general diseases	2	1										1						2				1		1	2					1							1			
III.—Diseases of the Nervous System.																																								
Group Total	52		4	3			1		1	2		1		1	5	8	12	14		26	26		37	9	5	1	18	17	17			3	4	7	4	5	10	7	2	2	1	3	4
70. Encephalitis	1													1				1			1					1					1										
71A. Meningitis	2		1			1												1	1		2									1	1									
73. Other diseases of the spinal cord	6							1	1					2	2			2	4		4	1	1		2	3	1			1	2				2		1	2		
74A. Cerebral haemorrhage, apoplexy	21												3	4	9	5		8	13		14	3	3	1	4	7	10			1	2	1	1	1	5	6	1		1	2
74B. Cerebral thrombosis and embolism	2										1					1		1	1		1	1			1	1						1		1					1	
75A. Hemiplegia	1											1		1		1		1				1																		
75B. Other forms of paralysis	6											1		1		4		4	2		4	2			1	2	3					2	1	2				1		
78 Epilepsy	1															1			1			1					1					1								
80. Infantile convulsions (under 5 years of age)	4	4																3	1		4				4									1	2					1
82B. Neuritis	2															1	1	2			2					2				1										
84. Other diseases of the nervous system	3									1				1	1			1	2		3				2			1				1		1	1					
86A. Diseases of the ears	3		2													1		2	1		2		1		2		1		1			1						1		
IV.—Diseases of the Circulatory System.																																								
Group Total	79	1						1	1	2		3	6	12	36	17		49	30		51	25	1	2	15	40	24			4	9	5	11	6	6	4	8	10	7	4	5
87. Pericarditis	1								1									1			1				1						1						1			
88. Acute endocarditis and myocarditis	2												2	1	1			1	1		1	1				2						1								
90. Other diseases of the heart	55							1		2		3	3	10	27	9		32	23		37	16	1	1	11	26	18			4	5	3	10	3	3	4	5	7	4	3	4
91B. Arteriosclerosis	19	1											1	2	9	6		14	5		12	6		1	3	11	5				3		1	3	3		2	3	2	1	1
92. Atheroma and other diseases of the arteries	1															1		1				1				1												1		
94. Diseases of the veins (varicos, haemorrhoid, phlebitis, etc.)	1															1			1			1					1					1								

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GREY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII.—The Puerperal State																																									
Group Total	4									2	1	1							4		4					4							1	1	1	1					
143A. Abortion	1									1									1		1					1								1							
144. Puerperal haemorrhage	1											1							1		1					1							1								
148. Puerperal albuminuria and convulsions	2									1	1								2		2					2							1			1					
IX.—Diseases of the Cellular Tissue.																																								
Group Total	2														1	1		2				2				2												1	1		
151. Gangrene	2														1	1		2				2				2												1	1		
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1							1										1			1				1							1								
156. Diseases of the bones (tuberculosis and rickets excepted)	1							1										1			1				1							1								
XI.—Malformations.																																								
Group Total	5	5																2	3		5				5				1			1	1			1			1
159A. Congenital malformations not otherwise specified (still-births excepted)	4	4																2	2		4				4				1				1			1			1
159C. Congenital malformations of the heart	1	1																	1		1				1							1							
XII.—Diseases of Early Infancy.																																								
Group Total	17	17																8	9		17				17				3		4	2			2	4		1		1
160B. Congenital debility, icterus and scleroma	3	3																	3		3				3				2		1								
161A. Premature birth	10	10																6	4		10				10				1		2		1			2	3			1
162. Other diseases peculiar to early infancy	4	4																2	2		4				4						1	1				1		1		
XIII.—Old Age.																																								
164. Senility total	35														8	27		14	21		7	18	9	1	12	23			5	2	3	2	1	2	1	1	6	5	4	3

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CAUSES OF DEATH IN THE COUNTY OF HALDIMAND, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**194**	**20**	**4**	**3**	**2**	**4**	**5**	**3**	**12**	**4**	**8**	**16**	**30**	**52**	**29**	...	**110**	**84**	...	**168**	**19**	**4**	**3**	**69**	**82**	**41**	...	**2**	**10**	**13**	**12**	**25**	**19**	**9**	**20**	**16**	**18**	**18**	**20**	**14**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	18	1	1	1	1	1	3	..	1	3	...	...	1	2	2	1	..	9	9	...	17	1	...	...	12	5	1	...	...	...	...	2	2	2	2	1	3	...	5	1	..
7. Measles	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Scarlet Fever	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	..	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
9. Whooping cough	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	2	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
10. Diphtheria	4	...	...	1	1	1	1	...	...	...	...	...	...	...	...	...	..	3	1	...	4	...	...	...	4	...	...	...	...	...	...	2	...	1	...	...	1	...	1	...	...
11A. Influenza with pneumonic complications specified	2	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	..	1	1	...	2	...	...	...	2	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
11B. Influenza without pneumonic complications specified	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	..	1	1	...	1	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
23. Encephalitis lethargica	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	..	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
25. Purulent infection, septicaemia	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	..	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
31. Tuberculosis of the respiratory system	4	...	..	...	...	...	...	1	1	...	...	...	...	1	1	..	..	2	2	...	4	...	...	...	1	2	1	...	...	...	...	...	1	...	...	1	..	2	...	..
Total deaths from tuberculosis	4	...	...	...	...	...	...	1	1	...	...	...	...	1	1	..	..	2	2	...	4	...	...	...	1	2	1	..	...	...	...	...	1	...	...	1	..	2	...	..
II.—General Diseases.																																									
Group Total	22	...	...	...	...	...	1	...	...	...	3	4	6	6	2	..	8	14	...	19	3	...	...	3	13	6	...	...	1	1	1	1	1	4	1	4	2	3	3
43. Malignant tumors of the buccal cavity	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	..	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
44. Malignant tumors of the stomach and liver	5	...	...	...	...	...	...	...	...	...	...	...	3	2	...	..	1	4	...	5	...	...	...	...	3	2	...	...	...	1	...	...	1	1	...	...	...	1	1	...
47. Malignant tumors of the breast	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	..	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
49. Malignant tumors of other or unspecified organs	6	...	...	...	...	...	...	...	...	...	...	2	1	2	..	1	..	2	4	...	5	1	...	...	1	3	2	...	...	...	...	...	...	...	1	1	1	1	..	2
Total deaths from cancer	13	...	...	...	...	..	...	...	...	...	...	2	2	6	2	1	..	4	9	...	11	2	...	...	2	7	4	...	..	..	1	...	..	1	1	3	1	1	2	1	2
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...

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HALDIMAND—Concluded.

Number of Columns.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
111A. Ulcer of the stomach	1	1						1										1			1				1												1				
112. Other diseases of the stomach (cancer excepted)	2	1														1		2			2				1	1											1	1			
113. Diarrhoea and enteritis (under 2 yrs.)	1	1																1			1				1														1		
117. Appendicitis and typhlitis	2								1					1				2			2				1	1			1									1		
118A. Hernia	2						1							1				2			2				1	1							1							1
126. Peritonitis of unstated origin	1									1									1		1					1										1				
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1									1									1		1					1											1			
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																							
Group Total	8											1		4	3			4	4		8				3	3	2					1	1		1	2		2	1
129. Chronic nephritis (Bright's disease)	6											1		3	2			3	3		6				2	3	1					1	1			1		2	1
135. Diseases of the prostate	1													1				1			1						1									1			
139. Benign tumors of the uterus	1														1				1		1				1											1			
VIII.—The Puerperal State.																																								
Group Total	2								1	1									2		2					2							1	1						
143A. Abortion	1								1										1		1					1								1						
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1									1									1		1					1						1							
XI.—Malformations.																																								
Group Total	1	1																1			1				1						1									
159C. Congenital malformations of the heart	1	1																1			1				1						1								
XII.—Diseases of Early Infancy.																																							
Group Total	11	11																7	4		11				11						1		4		1		1	1	3	
160B. Congenital debility, icterus and scleroma	4	4																4			4				4								1		1				2	
161A. Premature birth	6	6																2	4		6				6						1		3				1	1		
162. Other diseases peculiar to early infancy	1	1																1			1				1														1	

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CAUSES OF DEATH IN THE COUNTY OF HALIBURTON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1	2.	3.	4	5-9.	10-14.	15-19.	20-29.	30-39.	40-49	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**137**	**27**	**1**			**4**	**4**	**4**	**1**	**5**	**7**	**12**	**14**	**10**	**28**	**20**		**82**	**55**		**111**	**17**	**6**	**3**	**49**	**5**	**29**			**15**	**18**	**24**	**12**	**10**	**11**	**11**	**3**	**5**	**9**	**9**	**10**
I Endemic, Epidemic and Infectious Diseases.																																							
Group Total	13	3				2	3	2		1		2						7	6		13				10	2	1			1	2	2	1		1	1	1		4		
8. Scarlet fever	1						1												1		1				1					1										
9. Whooping Cough	1	1																1			1				1				1											
10. Diphtheria	6	1				1	2	2										2	4		6				6						1			1		1		3		
16c. Dysentery due to other causes or of unspecified origin	1					1												1			1				1													1		
25. Purulent infection, septicaemia	1									1									1		1					1									1						
31 Tuberculosis of the respiratory system	2											2						2			2					1	1			1		1								
Total deaths from tuberculosis	2											2						2			2					1	1			1		1								
38a. Syphilis, primary	1	1																1			1				1						1									
II —General Diseases.																																								
Group Total	15									1		2	5	2	3	2		7	8		11	3	1		1	13	1			3	2	1	2	2	2				1	2
43. Malignant tumors of the buccal cavity	1														1			1				1			1															
44. Malignant tumors of the stomach and liver	2											1			1			2				2			2					1				1						
46. Malignant tumors of the female genital organs	1														1			1			1				1														1	
49. Malignant tumors of other or unspecified organs	4													2	1	1		1	3		3		1		3	1				2		1		1					
Total deaths from cancer	8											1		2	3	2		4	4		4	3	1		7	1				3		1	1	2					1
51. Rheumatic fever	1												1					1			1				1							1							
52. Chronic rheumat sm, osteo-arthritis, gout	1												1						1		1				1						1								
57. Diabetes	1												1					1			1					1													1
58a. Pernicious anaemia	3											1	2					1	2		3					3					1		1					1	
58b. Other anaemias and chlorosis	1									1									1		1					1													

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HALIBURTON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	2	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII.—The Puerperal State.																																									
Group Total	1									1									1		1					1					1										
143c. Other accidents of pregnancy	1									1									1		1					1					1										
XI.—Malformations.																																									
Group Total	1	1								1								1			1				1					1											
159a. Congenital malformations not otherwise specified (still-births excepted)	1	1																1			1				1					1											
XII.—Diseases of Early Infancy.																																									
Group Total	14	14																9	5		14				14						2		1	3		2		1	2		3
160b. Congenital debility, icterus and scleroma	7	7																5	2		7				7						2			2		1		2		
161a. Premature birth	6	6																3	3		6				6								1	1		1		1		2
161b. Injury at birth	1	1																1			1				1															1
XIII.—Old Age.																																								
164. Group Total	6														2	4		4	2		4	1	1			3	3			1		2	1			1			1	
XIV.—External Causes.																																									
Group Total	14	1				1	1	1	1	1		3	1		2	2		12	2		13	1			7	4	3				1	3			3	3	1	1		1	1
179. Burns (conflagration excepted)	1															1		1			1						1									1				
181. Accidental absorption of irrespirable or poisonous gas	1												1						1		1					1					1									
182. Accidental drowning	6					1	1	1	1	1		1						6			6				4	2								2	3					1
183. Accidental injury by firearms (war casualties excepted)	1											1						1			1				1													1		
185. Accidenta injury by fall	1														1			1			1						1							1						
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	1											1						1			1					1					1									
188f. Other accidental injuries by crushing, etc	1											1						1			1					1					1									
192b. Hunger or thirst	1	1																	1		1				1						1									
201c. Fracture (cause not specified)	1															1		1				1				1					1									
202. Other external violence	1														1			1			1				1															
XV.—Ill-defined Diseases.																																								
Group Total	3											2		1				3			2	1				3				1						1				1
205a. Cause of death unstated or ill-defined	3											2		1				3			2	1				3				1						1				1

CAUSES OF DEATH IN THE COUNTY OF HALTON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**240**	**46**	**4**	**2**	**1**	**1**	**5**	**2**	**4**	**9**	**14**	**15**	**21**	**32**	**48**	**34**	**2**	**132**	**108**		**164**	**65**	**6**	**5**	**100**	**98**	**42**			**20**	**18**	**30**	**19**	**19**	**17**	**22**	**22**	**19**	**15**	**15**	**24**
I. Endemic, Epidemic and Infectious Diseases																																								
Group Total	27	5	1				2		1	2	2	4	4	4	2			16	11		18	7	1	1	14	11	2			2	1	2	3	4	3		1	2	5	1	3
7. Measles	1	1																1			1				1					1											
9. Whooping cough	2	2																2			2				1								1								
10. Diphtheria	1						1												1		1				1							1		1							
11b. Influenza without pneumonic complications specified	2																		2		2				1	1															1
16c. Dysentery due to other causes or of unspecified origin	4	1	1							1		1							2		2				1	1								1				1			
21. Erysipelas	1												1		1			2	2		4				3		1										1	2	1	
25. Purulent infection, septicaemia	2														1			1			1	1				1	1				1									
31. Tuberculosis of the respiratory system	11								1	1	2	3	2	2				1	1		1	1				1	1			1				1						
32. Tuberculosis meninges and central nervous system generally	1						1											7	4		5	4	1	1	4	7					2	1	3			1	1	2		1
																		1			1					1							1							
Total deaths from tuberculosis	12						1		1	1	2	3	2	2				7	5		6	4	1	1	5	7						2	1	4		1	1	2		1
38d. Syphilis, hereditary	1	1																1			1				1															
38e. Syphilis, stage not indicated	1												1					1				1				1							1							1
II.—General Diseases.																																								
Group Total	27	1					1			1	2	1	4	8	7	2		14	13		20	6	1		6	16	5			2	2	3	3	1	2	4	2	1	1	4	2
44. Malignant tumors of the stomach and liver	7												1	3	3			6	1		5	2			1	6					1	1	1			1			2	1
45. Malignant tumors, peritoneum, intestines and rectum	3												1	1	1			1	2		3					2	1								1					1
47. Malignant tumors of the breast	2												1		1				2		1	1				1	1			1										
48. Malignant tumors of the skin	1															1		1			1				1															
49. Malignant tumors of other or unspecified organs	3													1	1	1		1	2		2	1				2	1		1											

HALTON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Total deaths from cancer	16												3	5	6	2		9	7		11	5			2	11	3			1	2	1	1	1	1	3		1	1	2	2
50 Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1														1				1		1						1					1									
52. Chronic rheumatism, osteo-arthritis, gout	2					1								1				1	1		2				1	1			1			1								
56. Rickets	1	1																1			1				1										1						
57. Diabetes	4										2	1		1				2	2		2	1	1			3	1				1			1		1			1	
58A. Pernicious anaemia	2												1	1				1	1		2				1	1										1			1	
60A Exophthalmic goitre	1									1									1		1				1							1								
III.—Diseases of the Nervous System.																																									
Group Total	24	1				1				3	1	1	2	3	7	5		9	15		15	7	2		9	8	7			1	3	3	1	4	3		3	2	1	2	1
70. Encephalitis	1					1													1		1				1											1				
71A. Meningitis	2									1	1							2			1		1		1	1							1						1	
73. Other diseases of the spinal cord	2									1			1					1	1		2				1	1							2							
74A. Cerebral haemorrhage, apoplexy	11											1	1	3	3	3		3	8		5	5	1		3	5	3			1	2	3		1			1	1		1	1
75A. Hemiplegia	1															1		1			1					1								1						
75B. Other forms of paralysis	2														2			1	1		1	1			1		1							1		1				
77. Othes forms of mental alienation	1														1				1		1						1											1		
80. Infantile convulsions (under 5 years of age)	1	1																1			1				1						1									
82A. Hysteria and neuralgia	1															1			1			1				1										1				
84. Other diseases of the nervous system	1									1									1		1				1							1								
86B. Diseases of the mastoid process (or sinus)	1														1				1		1						1							1						
IV.—Diseases of the Circulatory System.																																									
Group Total	55	1				1			2	3	3		5	11	15	13	1	30	25		34	18	2	1	11	32	12			7	3	6	5	4	5	6	4	2	3	2	8
88. Acute endocarditis and myocarditis.	5						1				1	2		1				3	2		2	2	1		2	3						1				1				3
89. Angina pectoris	4													1	1	2		3	1		3			1		3	1					1		1	1	1				
90. Other diseases of the heart	27	1								2	2		1	4	8	8	1	14	13		17	10			6	13	8			3	2	1	3	1	4	2	3	1	2		5
91A. Aneurism	2											1		1				2			1	1				2							1			1				
91B. Arteriosclerosis	14												1	4	5	4		8	6		8	5	1		3	8	3			2	1	3	1	2		2		1		2	
92. Atheroma and other diseases of the arteries	1															1			1		1					1												1		
94. Diseases of the veins (varicos, haemorrhoid, phlebitis, etc.)	1												1						1		1					1			1											
95. Diseases of the lymphatic system (lymphangitis, etc.)	1													1					1		1					1			1											
V.—Diseases of the Respiratory System.																																									
Group Total	35	8	1	1		1		1			2	2	3	11	5			23	12		25	9		1	16	12	7			2	5	9	4	5	1	1	2		1		5
99A. Bronchitis, acute	3	1					1								1			1	2		3				2	1					2							1		

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XI.—Malformations.																																									
Group Total	2	2																	2		2				2							1							1		
159A Congenital malformations not otherwise specified (still-births excepted)	2	2																	2		2				2							1							1		
XII.—Diseases of Early Infancy.																																								
Group Total	13	13																8	5		13				13					1	1	2	2		3	1	1		2	
160B. Congenital debility, icterus and scleroma	6	6																4	2		6				6					1		1			2		1		1	
161A. Premature birth	5	5																3	2		5				5						1	1	1			1			1	
162. Other diseases peculiar to early infancy	2	2																1	1		2				2							1			1					
XIII.—Old Age.																																								
164. Group Total	7														2	5		4	3		1	6			1	3	3				2				2					3
XIV.—External Causes.																																								
Group Total	10						1	2		1	1	1	2	1	1		9	1		7	3			5	2	3					2		1	2	3			1		1
177. Other acute accidental poisonings	1												1				1			1	1					1							1							
182. Accidental drowning	2								2								2			1	1			2										1	1					
183. Accidental injury by firearms (war casualties excepted)	1							1									1			1				1										1						
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	1										1						1			1					1													1		
188C. Automobile accidents	1										1						1			1					1													1		
194. Excessive heat	2											1				1	1	1		1	1			1		1									2					
201C. Fractures (cause not specified)	3													2	1		3			3				1	1	1					2								1

CAUSES OF DEATH IN THE COUNTY OF HASTINGS, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	448	91	11	1	4	1	8	2	8	27	21	18	30	69	86	70	1	233	215	. .	399	38	6	5	174	191	83	. . . .	. .	51	35	50	41	33	24	29	37	40	34	40	34
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	70	12	1	1	1	.	2	.	3	10	9	9	5	7	8	2	.	28	42	. .	68	2	. .	. .	33	31	6	. .	. .	9	6	10	6	2	3	5	8	3	7	10	1
1A. Typhoid fever	3	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	1	. .	1	. .	.	2	1	. .	3	. .	. .	. .	. .	3	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	1	1	. .	. .	. .
6. Smallpox	3	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	1	. .	. .	.	1	2	. .	3	. .	. .	. .	. .	3	. .	. .	. .	. .	2	1	. .	. .	. .	. .	. .	. .	. .	. .
7. Measles	1	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	.	1	. .	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .
8. Scarlet fever	3	1	. .	. .	. .	1	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	.	2	1	. .	3	. .	. .	. .	3	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	2	. .
9. Whooping cough	7	6	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	.	1	6	. .	7	. .	. .	. .	7	. .	. .	. .	. .	2	. .	2	. .	. .	1	1	. .	1	. .	. .
10. Diphtheria	1	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	.	. .	1	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .
11A. Influenza with pneumonic complications specified	1	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	.	. .	1	. .	1	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .
11B. Influenza without pneumonic complications specified	4	2	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	.	2	2	. .	4	. .	. .	. .	3	1	. .	. .	. .	. .	3	1	. .	. .	. .	. .	. .	. .	. .	. .
16C. Dysentery due to other causes or of unspecified origin	5	2	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	.	2	3	. .	5	. .	. .	. .	3	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	2	1	2	. .	. .
21. Erysipelas	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	.	1	. .	. .	1	. .	. .	. .	1	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
31. Tuberculosis of the respiratory system	39	. .	. .	. .	. .	. .	. .	. .	2	7	8	7	4	6	5	. .	.	15	24	. .	37	2	. .	. .	12	23	4	. .	. .	5	1	4	6	1	3	3	4	2	3	6	1
36B. Tuberculosis of the bones (vertebral column excepted)	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	.	1	. .	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .
37A. Disseminated tuberculosis—acute	1	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	.	. .	1	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .
Total deaths from tuberculosis	41	. .	. .	. .	. .	. .	. .	. .	2	8	9	7	4	6	5	. .	.	16	25	. .	39	2	. .	. .	14	23	4	. .	. .	5	1	6	6	1	3	3	4	2	3	6	1
II.—General Diseases.																																								
Group Total	47	1	. .	. .	. .	. .	1	. .	1	4	3	1	10	14	7	5	. .	21	26	. .	41	3	2	1	10	30	7	. .	. .	4	3	2	3	7	2	. .	6	5	6	4	5
43. Malignant tumors of the buccal cavity	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	. .	. .	.	2	. .	. .	2	. .	. .	. .	1	1	. .	. .	. .	. .	. .	1	. .	. .	1	. .	. .	. .	. .	. .	. .
44. Malignant tumors of the stomach and liver	12	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	3	7	2	. .	.	5	7	. .	11	1	. .	. .	. .	10	2	. .	. .	1	. .	. .	1	. .	. .	. .	3	2	2	1	2
45. Malignant tumors of the peritoneum, intestines and rectum	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	.	1	1	. .	2	. .	. .	. .	. .	. .	2	. .	. .	1	. .	. .	. .	1	. .	. .	. .	. .	. .	. .	. .
46. Malignant tumors of the female genital organs	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .	. .	. .	.	. .	1	. .	. .	. .	. .	1	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	. .

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
47. Malignant tumors of the breast	1												1						1			1				1														1
48. Malignant tumors of the skin	3												1			2		2	1		3				1	2				1				1						1
49. Malignant tumors of other or unspecified organs	7												3	2	1	1		3	4		6			1	1	5	1			1	1		1	1			2		1		
Total deaths from cancer	28												9	11	3	5		13	15		24	3		1	3	20	5			4	1	1	2	3	1		5	2	3	2	4
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1	1																	1		1				1														1		
51. Rheumatic fever	3									1	1				1			1	2		2		1		1	2					1		2							
52. Chronic rheumatism, osteo-arthritis	2						1				1							1	1		2				1	1								1						1
57. Diabetes	4									2				1	1			3	1		4				1	2	1				1						2	1		
58A. Pernicious anaemia	7								1		1	1	1	1	2			3	4		7				2	4	1				1		1	1			1	2	1	
58B. Other anaemias and chlorosis	1													1					1				1			1										1				
60B. Other diseases of the thyroid gland	1									1									1		1				1														1		
III.—Diseases of the Nervous System.																																								
Group Total	42	5	2							1	1	2	1	11	8	11		24	18		41	1			14	16	12			5	1	3	6	3	1	3	3	8	2	2	5
70. Encephalitis	1											1						1			1					1													1		
72. Tabes dorsalis (locomotor ataxy)	1												1					1			1					1														1
73. Other diseases of the spinal cord	1	1																	1		1				1													1		
74A. Cerebral haemorrhage, apoplexy	21									1				7	5	8		13	8		20	1			3	8	10			3	1	1	3	1	1	1	3	4	1		2
74B. Cerebral thrombosis and embolism	1													1					1		1				1													1		
75A. Hemiplegia	1														1				1		1					1				1										
75B. Other forms of paralysis	7													2	2	3		5	2		7				2	3	2			1			2	1		2		1		
76. General paralysis of the insane	1											1							1		1				1														1	
78. Epilepsy	1													1					1		1					1						1								
80. Infantile convulsions (under 5 yrs. of age)	6	4	2															4	2		6				6						1	1	1			2			1	
84. Other diseases of the nervous system	1										1								1		1					1													1	
Diseases of the Circulatory System.																																								
Group Total	65	1	1							1		2	6	16	27	11		36	29		55	8		2	7	38	20			5	5	7	11	3	6	5	6	4	2	5	6
88. Acute endocarditis and myocarditis	1												1						1		1						1													1
89. Angina pectoris	2										1			1				2			2					2						1				1				
90. Other diseases of the heart	35		1										3	13	13	5		20	15		27	6		2	2	21	12			2	3	5	7	2	6	2	2	2	2	1	1
91A. Aneurism	1														1				1		1						1									1				
91B. Arteriosclerosis	25									1		1	2	2	13	6		14	11		23	2			4	15	6			2	2	2	3	1		3	3	1		4	4
95. Diseases of the lymphatic system lymphangitis, etc)	1	1																	1		1				1					1										

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII —The Puerperal State.																																										
Group Total	5									3	1	1							5		4	1				5					1		1					2		1	
143c. Other accidents of pregnancy	1									1									1		1					1															
146. Puerperal sepsis	1									1									1			1				1							1								
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1												1						1		1					1													1		
148. Puerperal albuminuria and convulsions	1									1									1		1					1					1										
149. Childbirth (without other explanation)	1										1								1		1					1												1			
IX —Diseases of the Skin and Cellular Tissue																																									
Group Total	1															1		1				1				1								1							
151. Gangrene	1															1		1				1				1								1							
XI.—Malformations.																																									
Group Total	3	3																1	2		3				3								1				2			
159a. Congenital malformations not otherwise specified (still-births excepted)	1	1																	1		1				1								1							
159c. Congenital malformations of the heart	2	2																1	1		2				2												2			
XII.—Diseases of Early Infancy.																																									
Group Total	31	31																20	11		31				31					1	3	3	3	3	6	3	1	5	2	1
160b. Congenital debility, icterus and scleroma	10	10																5	5		10				10					1		1		2	1	1	3	1	
161a. Premature birth	16	16																10	6		16				16						3	1	1	3	3	1		2	1	1
161b. Injury at birth	3	3																3			3				3							1			1	1				
162. Other diseases peculiar to early infancy	2	2																2			2				2							2								
164. XIII.—Old Age.																																									
Group Total		21													5	16		10	11		16	5			4	8	9			4	2	3	1	2		1	2		1	2	3
XIV.—External Causes.																																									
Group Total	29	2	1			1	1	3		6	1	1	5	5	3			23	6		26	2		1	14	11	4			2		5	1	2	3	2	7	2	2	1	2
181. Accidental absorption of irrespirable or poisonous gas	2	1									1							2			1	1			1	1						1									

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**527**	**53**	**4**	**2**	**3**		**11**	**9**	**6**	**22**	**27**	**23**	**54**	**72**	**116**	**125**		**253**	**274**		**374**	**128**	**16**	**9**	**154**	**217**	**155**		**1**	**40**	**49**	**51**	**45**	**39**	**33**	**37**	**47**	**43**	**54**	**40**	**49**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	54	6	3	..	..	..	4	1	2	14	4	7	2	4	3	4	..	25	29	.	47	5	..	2	31	17	6	..	..	2	2	9	6	5	3	4	4	6	5	4
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
7. Measles	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
8. Scarlet fever	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
9. Whooping cough	3	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3	..	..	..	3	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..
10. Diptheria	6	1	..	..	..	..	3	..	..	1	..	1	..	..	..	..	..	3	3	..	5	..	..	1	4	2	..	..	..	..	..	4	..	..	..	1	1	..	..	..
11B. Influenza, without pneumonic complications specified	11	..	1	..	..	..	..	..	1	2	..	2	1	..	1	3	..	6	5	..	8	3	..	..	4	4	3	..	..	1	2	1	2	..	1	..	1	..	..	1	2
16C. Dysentery, due to other causes or of unspecified origin	4	1	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	2	2	..	3	1	..	..	1	2	1	..	..	..	..	..	..	..	..	..	1	2	1	..
25. Purulent infection, septicaemia	3	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	1	2	..	3	..	..	..	..	2	1	..	..	..	..	..	..	2	..	..	..	1	..	..	..
31. Tuberculosis of the respiratory system	18	..	..	..	..	..	..	1	..	7	3	2	1	3	1	..	..	8	10	..	17	..	..	1	12	5	1	..	..	1	..	1	3	2	2	3	1	..	2	2	1
32. Tuberculosis, meninges and central nervous system generally	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	..	2	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	22	1	..	..	..	..	..	1	..	9	3	2	1	4	1	..	..	10	12	..	21	..	..	1	14	7	1	..	..	1	..	2	4	2	2	3	2	1	2	2	1
38E. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
42. Other endemic, epidemic or infectious diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
II.—General Diseases.																																								
Group Total	105	..	..	..	..	..	2	2	1	2	6	8	23	23	24	14	..	46	59	..	84	20	1	..	20	63	22	..	..	9	10	6	12	10	12	6	9	6	9	7	9
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
44. Malignant tumors, stomach and liver	23	..	..	..	..	..	..	..	..	..	1	1	5	6	6	4	..	11	12	..	16	7	..	..	2	11	10	..	..	1	2	..	4	6	4	1	1	1	2	..	1
45. Malignant tumors, peritoneum, intestines and rectum	10	..	..	..	..	..	..	..	..	..	1	2	..	..	2	4	1	6	4	..	9	1	..	..	..	10	..	..	..	1	1	..	..	..	1	..	2	1	1	3	..

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HURON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	42	7		1	1		1	1	1	1	1	2		6	9	11		22	20		31	9	1	1	15	13	14			5	7	6	4	4	1	1	3	2	3	2	4
98. Diseases of the larynx	1				1													1			1				1							1									
99A. Bronchitis, acute	2						1									1		1	1		2				1		1														
99B. Bronchitis, chronic	5														2	3		2	3		4	1				1	4			1	1		1					1	1	
99C. Bronchitis, not otherwise defined, under 5 years of age	2	2																1	1		2				2					1									1		
100A. Broncho-pneumonia	6			1								1		1		3		5	1		3	3			2	1	3			1	1	1	1							2
101A Pneumonia lobar	7	2								1				2	2			2	5		7				2	4	1			1	1		1		1	1	1			
101B. Pneumonia, not otherwise defined	13	3					1				1	1		2	3	2		5	8		9	3	1		6	5	2			3	2	1		3		1	2			1
102. Pleurisy	3								1					1		1		3			1	1		1	1	1	1			1	1							1		
105. Asthma	3														2	1		2	1		2	1				1	2													1
VI.—Diseases of the Digestive System.																																								
Group Total	31	7	1				1	2		1		3	4	2	7	3		15	16		23	4	1	3	13	13	5			2	1	3	2	1	2	3	1	9	1	3	3
108B. Other diseases of the buccal cavity and its annexa	1													1				1			1						1			1										
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2						1								1			1	1		1			1	1	1								1			1			
111A. Ulcer of the stomach	1												1					1			1					1												1		
111B. Ulcer of the duodenum	1												1					1			1					1					1									
112. Other diseases of the stomach (cancer excepted)	1	1																1			1				1							1								
113. Diarrhoea and enteritis (under 2 years)	6	5	1															4	2		6				6					1					1	4			
114. Diarrhoea and enteritis (over 2 years)	3							1							2				3		2			1	1	1	1			1						1		1		
117. Appendicitis and typhlitis	4						1			1		2						1	3		4				2	2					1				2	1		1		
118A. Hernia	1												1						1		1					1														
118B. Intestinal obstruction	2	1											1					1	1		2				1	1														1
119B. Other diseases of the intestine	1														1			1						1		1						1								1
122B. Cirrhosis, not returned as alcoholic	5											1		1	2	1		2	3		2	2	1		1	3	1				1		1		1		2		1	
124. Other diseases of the liver	3														1	2		1	2		1	2				1	2							1						1
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	40			1				1		2	1		4	7	8	16		21	19		29	9	1	1	9	18	12		1	2	4	4	4	2		5	7	2	2	4	4
128. Acute nephritis	3			1						1				1				3			2	1			3								1			1				
129. Chronic nephritis (Bright's disease)	24						1			1	1		3	5	5	8		9	15		18	4	1	1	5	12	6		1	2	4	3	2	1		4	4	1	1	1	1
133. Diseases of the bladder	6														2	4		3	3		4	2				2	4						1	2			2			1	1
135. Diseases of the prostate	6													1	1	4		6			4	2			1	3	2										1		1	2	2
141. Other diseases of the female genital organs	1												1						1		1					1											1				

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HURON—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIII.—Old Age.																																									
164. **Group Total**	32													1	9	22		15	17		6	22	3	1	6	9	17			6	8	5	1	1		1	2	4	2	1	1
XIV.—External Causes.																																									
Group Total	18	2			2		2		1	1	2		1	3	1	3		14	4		11	6	1		9	5	4			2	1		1		1	3	2	1	2	3	2
168. Suicide by hanging or strangulation	1												1					1			1					1								1						
177. Other acute accidental poisonings	1	1																	1		1				1															
178. Conflagration	1				1													1			1				1												1			
182. Accidental drowning	2							1		1								2				1	1		2										1	1				
184. Accidental injury by cutting or piercing instruments	1				1													1			1				1		1			1									
185. Accidental injury by fall	2	1												1				2			2				1						1									
188a. Railroad accidents	1										1							1			1				1	1														
188c. Automobile accidents	1									1								1			1																	1		
189. Injury by animals (poisoning excepted)	1														1			1			1				1													1		
194. Excessive heat	1																	1				1				1														1
201c Fracture (cause not specified)	5						1				1			1		2		3	2		3	2			2	1	2			1			1			1		1		
202. Other external violence	1															1			1			1					1											1		
XV.—Ill-Defined Diseases.																																								
Group Total	4												1	2	1			4			2	1	1		1	3												1	1	2
205a. Cause of death unstated or ill-defined	4												1	2	1			4			2	1	1		1	3											1	1	2	

CAUSES OF DEATH IN THE DISTRICT OF KENORA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	86	10	9	2	2	2	12	4	7	4	5	6	9	6	3	4	1	45	41	.	66	5	6	9	57	17	12	.	.	14	12	11	6	9	5	11	5	3	5	2	3
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	30	1	3	1	2	1	9	4	5	1	2	.	.	1	.	.	.	12	18	.	30	.	.	.	25	3	2	.	.	8	3	6	1	5	3	4	.	.	.	.	.
7. Measles	2	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	2	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.
9. Whooping cough	2	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	2	.	.	.	2	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.
10. Diphtheria	2	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	2	.	2	.	.	.	2	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.
11B. Influenza, without pneumonic complications specified	11	1	2	.	.	.	4	3	1	.	.	.	.	.	.	.	.	4	7	.	11	.	.	.	11	.	.	.	.	4	1	2	.	2	.	2	.	.	.	.	.
31. Tuberculosis of the respiratory system	13	.	.	.	2	.	2	1	4	1	2	.	.	1	.	.	.	7	6	.	13	.	.	.	8	3	2	.	.	3	.	3	1	3	3	.	.	.	.	.	.
Total deaths from tuberculosis	13	.	.	.	2	.	2	1	4	1	2	.	.	1	.	.	.	7	6	.	13	.	.	.	8	3	2	.	.	3	.	3	1	3	3	.	.	.	.	.	.
II.—General Diseases.																																								
Group Total	5	.	.	.	.	.	.	.	1	.	.	1	1	2	.	.	.	2	3	.	2	3	.	.	2	3	.	.	.	1	1	.	2	.	.	.	.	1	.	.	.
44. Malignant tumors, stomach and liver	2	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	1	.	.	2	.	.	1	1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.
46. Malignant tumors, female genital organs	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
Total deaths from cancer	3	.	.	.	.	.	.	.	.	.	.	1	1	1	.	.	.	1	2	.	1	2	.	.	1	2	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.
57 Diabetes	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
58B. Other anaemias and chlorosis	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
III.—Diseases of the Nervous System.																																								
Group Total	5	.	1	1	.	.	.	.	.	.	.	.	1	.	1	1	.	3	2	.	3	1	.	1	2	2	1	.	.	.	.	2	.	.	1	.	.	1	.	1
74A. Cerebral haemorrhage, apoplexy	3	.	.	.	.	.	.	.	.	.	.	.	1	.	1	1	.	3	.	.	1	1	.	1	1	2	1	.	.	.	.	1	.	.	.	.	.	1	.	1
78 Epilepsy	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
80. Infantile convulsions (under 5 years of age)	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.

KENORA—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System.																																									
Group Total	3								1				1	1				1	2		3				1		2			2	1									
91B. Arteriosclerosis	1												1						1		1						1				1									
96. Haemorrhage without determined cause; other diseases of the circulatory system	2								1					1				1	1		2				1		1			2										
V.—Diseases of the Respiratory System.																																								
Group Total	5		1			1						1			1	1		3	2		4			1	2	1	2			1	1		1					1		
98. Diseases of the larynx	1					1												1			1				1					1									
99A. Bronchitis, acute	1														1			1		1					1															
99D. Bronchitis, not otherwise defined, over 5 years of age	1														1				1		1						1								1					
100A. Broncho-pneumonia	1		1															1			1				1						1									
101A. Pneumonia, not otherwise defined	1											1						1						1			1					1								
VI.—Diseases of the Digestive System.																																								
Group Total	12	4	3				1						2	1			1	6	6		9	1	1	1	10	1	1					1		1	4	2	1	1	1
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1		1																1		1				1														1
112. Other diseases of the stomach (cancer excepted)	1																1	1						1	1													1	
113. Diarrhoea and enteritis (under 2 years)	6	4	2															3	3		6				6							1		1		1	1	2		
118B. Intestinal obstruction	1												1						1				1			1											1		
123. Biliary calculi	1													1					1			1					1								1				
124. Other diseases of the liver	1						1											1			1				1										1				
126. Peritonitis of unstated origin	1												1					1			1				1										1				
VIII.—The Puerperal State.																																								
Group Total	1											1							1		1					1								1						
149. Child-birth (without other explanation)	1											1							1		1					1								1						
XI.—Malformations.																																								
Group Total	1	1																1			1				1						1									
159C Congenital malformations of the heart	1	1																1			1				1						1									

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CAUSES OF DEATH IN THE COUNTY OF KENT, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**505**	**93**	**16**	**7**	**9**	**6**	**13**	**4**	**12**	**28**	**15**	**19**	**34**	**71**	**96**	**81**	**1**	**284**	**221**	.	**398**	**69**	**27**	**11**	**202**	**209**	**94**			**33**	**47**	**56**	**51**	**43**	**37**	**37**	**42**	**35**	**46**	**38**	**39**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	64	9	3	2	7	1	3	1	4	11	7	2	6	1	3	4		29	35	.	60	1	1	2	40	19	5			7	7	7	4	3	5	4	7	5	5	4	6
1A. Typhoid fever	3	.	.	.	.	.	.	.	.	.	2	1	.	.	.	.	.	3	.	.	2	.	.	1	1	2	.	.	.	.	.	1	.	.	.	.	.	1	.	.
7. Measles	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
8. Scarlet fever	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
9. Whooping cough	7	6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	4	3	.	7	.	.	.	7	.	.	.	.	1	2	2	1	.	.	.	.	1	.	.
10. Diphtheria	13	1	2	1	5	.	2	.	.	2	.	.	.	.	.	.	.	6	7	.	13	.	.	.	13	.	.	.	.	.	3	1	.	.	3	.	.	1	1	1	3
11A. Influenza, with pneumonic complications specified	5	.	1	.	1	.	.	.	.	.	.	.	2	.	.	1	.	3	2	.	5	.	.	.	2	2	1	.	.	.	1	2	1	.	.	.	1	.	.	.	.
11B. Influenza, without pneumonic complications specified	6	.	.	.	.	.	.	.	.	.	1	.	2	.	1	2	.	4	2	.	5	1	.	.	1	5	.	.	.	2	.	.	.	.	.	1	1	.	.	2
16C. Dysentery, due to other causes or of unspecified origin	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
31. Tuberculosis of the respiratory system	21	1	.	1	.	.	.	1	4	7	2	.	2	1	2	.	.	6	15	.	20	.	1	.	11	8	2	.	.	4	1	1	1	3	.	3	3	2	2	1	.
32. Tuberculosis, meninges and central nervous system generally	1	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
33. Tuberculosis of the intestines and peritoneum	2	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	2	.	2	.	.	.	.	1	1	.	.	.	.	.	.	.	.	1	.	.	1	.
36D. Tuberculosis of the genito-urinary system	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
36E. Tuberculosis of the organs other than the above	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.
Total deaths from tuberculosis	26	1	.	1	.	.	1	1	4	9	3	.	2	1	2	1	.	8	18	.	25	.	1	.	13	9	4	.	.	4	1	1	2	3	.	4	5	2	2	2	.
38E. Syphilis, stage not indicated	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
II.—General Diseases.																																								
Group Total	66	.	.	.	.	.	1	.	1	1	2	5	10	21	16	8	1	32	34	.	44	15	4	3	6	41	19	.	.	3	4	7	6	8	5	6	3	6	3	6	9
43. Malignant tumors of the buccal cavity	2	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	2	.	.	2	.	.	.	.	2	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.
44. Malignant tumors, stomach and liver	22	.	.	.	.	.	.	.	.	.	.	.	5	6	7	4	.	15	7	.	11	8	3	.	3	11	8	.	.	1	.	3	.	4	2	3	1	1	1	2	4

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KENT—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	60	14	5	.	1	1	1	.	1	1	.	.	1	9	14	12	.	35	25	.	47	10	2	1	25	22	13	.	.	3	9	12	8	9	3	3	2	2	3	2	4
98. Diseases of the larynx	1	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
99B. Bronchitis, chronic	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
99C. Bronchitis, not otherwise defined, under 5 years of age	4	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	.	4	.	.	.	4	.	.	.	.	.	.	2	1	.	1	.	.	.	.	.	.
99D. Bronchitis, not otherwise defined, over 5 years of age	5	.	.	.	.	.	.	.	.	.	.	.	.	.	3	2	.	4	1	.	3	1	1	.	1	3	1	.	.	1	.	.	1	1	.	.	.	.	1	1
100A. Broncho-pneumonia	8	5	1	.	.	.	.	.	.	.	.	.	.	.	1	1	.	6	2	.	7	1	.	.	6	1	1	.	.	1	1	.	1	2	.	.	.	.	2	.	1
100B. Capillary bronchitis	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
101A. Pneumonia, lobar	8	1	.	.	.	1	.	.	1	.	.	.	.	.	3	2	.	3	5	.	5	2	1	.	4	1	3	.	.	.	2	1	2	.	1	.	.	.	.	.	2
101B. Pneumonia, not otherwise defined	26	5	1	.	1	.	1	.	.	1	.	.	1	4	6	6	.	14	12	.	22	4	.	.	8	11	7	.	.	1	3	8	3	5	1	2	1	2	.	.	.
102. Pleurisy	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
103. Congestion and haemorrhagic infarct of the lung	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
105. Asthma	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	3	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	3	.	.	2	1	.	.	.	3	.	.	.	.	.	.	1	.	1	1	.	.	.	.	.
VI.—Diseases of the Digestive System.																																								
Group Total	61	23	5	5	.	2	4	2	1	2	2	1	4	2	4	4	.	32	29	.	54	3	4	.	45	13	3	.	.	3	5	3	4	.	3	2	11	10	11	4	5
108A. Diseases of the teeth and gums	2	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	2	.	.	2	.	.	.	2	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.
109. Diseases of the pharynx and tonsils (including adenoid vegetation	7	1	.	1	.	.	1	1	.	2	.	1	.	.	.	.	.	4	3	.	5	1	1	.	6	1	.	.	.	2	1	1	1	.	1	.	.	.	1	.	.
111A. Ulcer of the stomach	2	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	2	.	.	2	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
112. Other diseases of the stomach (cancer excepted)	5	1	.	1	.	.	.	.	1	.	.	.	.	1	.	1	.	2	3	.	4	1	.	.	2	3	.	.	.	.	2	.	.	.	1	.	1	1	.	.	.
113. Diarrhoea and enteritis (under 2 years)	23	19	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13	10	.	23	.	.	.	23	.	.	.	.	.	1	1	1	.	.	1	7	6	5	1	.
114. Diarrhoea and enteritis (over 2 yrs.)	8	.	.	1	.	1	1	1	.	.	1	.	.	.	1	2	.	4	4	.	5	1	2	.	5	2	1	.	.	.	.	1	.	.	.	1	1	3	.	1	1
117. Appendicitis and typhlitis	2	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	2	.	.	2	.	.	.	1	1	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.
118A. Hernia	2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	2	.	2	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
119P. Other diseases of the intestine	6	.	1	2	.	.	.	.	.	.	.	.	1	.	2	.	.	1	5	.	5	.	1	.	3	2	1	.	.	.	.	.	.	.	.	.	1	.	3	2	.
123. Biliary calculi	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
124. Other diseases of the liver	2	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	2	.	.	2	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
126. Peritonitis of unstated origin	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
VII.—Non-venereal Diseases of the Genito-urinary System and Its Adnexa.																																								
Group Total	24	1	.	.	.	.	.	1	.	2	.	2	2	4	6	6	.	15	9	.	16	6	2	.	3	15	6	.	.	3	2	3	1	3	1	3	3	2	2	.	1
129. Chronic nephritis (including unspecified over 10 years)	14	.	.	.	.	.	.	1	.	1	.	2	2	3	2	3	.	8	6	.	11	2	1	.	2	9	3	.	.	3	1	2	1	2	.	3	1	1	.	.	.

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KENT—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIII.—Old Age.																																									
164. **Group Total**	14														3	11		10	4		10	3	1		2	4	8			1	1	3	1		2	1		1	2	1	1
XIV.—External Causes.																																									
Group Total	23		2		1	2	4		4	1		3	3	1		2		17	6		19	2	2		17	4	2			3	2	2	1	3	2	1	5	1	1	2	
168. Suicide by hanging or strangulation	3											1	2					3			2	1			2	1				1		1				1				
177. Other acute accidental poisonings	1													1					1		1					1				1										
178. Conflagration																			1		1				1									1							
179. Burns (conflagration excepted)	1					1																																		
181. Accidental absorption of irrespirable or poisonous gas	1											1						1			1					1												1		
182. Accidental drowning	7		1		1	1	3		1									5	2		6		1		7						1		1	1		3	1			
183. Accidental injury by firearms (war casualties excepted)	1								1									1				1			1				1											
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	6		1						1	1		1	1			1		5	1		2	3	1		4	1	1			1	1			1	1		1		1		
188A. Railroad accidents	3		1						1				1					3				3			2		1			1				1				1		
188C. Automobile accidents	1									1								1			1				1											1				
188F. Other accidental injuries by crushing, etc	2											1				1		1	1		1		1		1	1				1				1						
194. Excessive heat	1															1			1		1						1								1					
202. Other external violence	2						1		1									2			2				2								1					1		
XV.—Ill-defined Diseases.																																								
Group Total	4	1								1	1		1					3	1		4				3	1								1	1			1	1	
205A. Cause of death unstated or ill-defined	4	1								1	1		1					3	1		4				3	1								1	1			1	1	

CAUSES OF DEATH IN THE COUNTY OF LAMBTON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**480**	**73**	**9**	**6**	**3**	**5**	**7**	**6**	**6**	**14**	**19**	**18**	**39**	**73**	**102**	**99**	**1**	**229**	**251**	...	**366**	**88**	**18**	**8**	**160**	**198**	**122**	...	...	**39**	**40**	**43**	**36**	**54**	**25**	**39**	**37**	**50**	**42**	**38**	**37**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	50	3	4	..	3	2	2	2	2	5	6	4	5	3	8	1	..	18	32	..	43	4	3	..	25	19	6	..	..	6	5	7	1	3	..	5	7	6	4	3	3
1A. Typhoid fever	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
8. Scarlet fever	5	..	..	..	2	..	1	1	..	..	1	..	..	..	..	..	..	1	5	..	5	..	..	..	5	..	..	..	..	2	..	2	..	..	..	..	1	..	..	..
9. Whooping cough	4	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	..	..	..	..	..	..	2	1	..	..	1
10. Diphtheria	3	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	1	2	..	2	..	1	..	3	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
11A. Influenza with pneumonic complications specified	2	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	4	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	1	3	..	3	1	..	..	..	3	1	..	..	..	1	2	..	..	1	..	..	..	..	..
15. Cholera nostras	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
21. Erysipelas	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	2	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1
31. Tuberculosis of the respiratory system	18	..	..	..	..	..	1	..	2	2	4	3	3	3	..	..	..	8	10	..	15	1	2	..	7	10	1	..	..	2	2	..	2	..	2	4	1	3	2	..
33. Tuberculosis of the intestines and peritoneum	5	..	1	..	..	..	..	..	..	2	1	..	..	..	1	..	..	1	4	..	4	1	..	..	2	2	1	..	..	1	1	1	1	..	..	..	..	..	..	1
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Total deaths from tuberculosis	26	..	1	..	..	..	1	..	2	4	5	4	4	3	2	..	..	11	15	..	21	3	2	..	9	14	3	..	..	3	3	1	1	3	..	2	4	1	4	3	1
II.—General Diseases.																																								
Group Total	64	..	..	..	..	..	..	..	1	2	3	3	11	20	12	12	..	32	32	..	52	10	1	1	10	39	15	..	..	5	3	5	8	5	4	2	4	9	4	5	10
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
44. Malignant tumors of the stomach and liver	12	..	..	..	..	..	..	..	..	..	1	1	..	6	2	2	..	6	6	..	9	3	..	..	2	8	2	..	..	1	1	2	..	1	1	1	..	..	1	1	3
45. Malignant tumors of the peritoneum, intestines and rectum	5	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	..	5	..	3	2	..	..	1	3	1	..	..	1	1	1	..	1	..	..	..	1	..	..	..

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
47. Malignant tumors of the breast	3											1	1		1				3		2		1			2	1				1					1				1
48. Malignant tumors of the skin	2												1			1		2			2					2											1			
49. Malignant tumors of other or unspecified organs	16												2	5	5	4		9	7		14	2			3	7	6			1		1	2	1	1		2	1	3	1	3
Total deaths from cancer	39										1	2	7	12	8	9		18	21		31	7	1		6	23	10			3	3	4	3	3	2	2	3	3	4	2	7
51. Rheumatic fever	3							1		2								2	1		3				2	1						1					1		1	
52. Chronic rheumatism, osteo-arthritis, gout	4											1		1	1	1		2	2		3	1				2	2						1	1	1				1	
57. Diabetes	1														1				1		1					1									1					
58A. Pernicious anaemia	11												2	6	2	1		8	3		11					9	2			2			2	1		1	4		1	
58B. Other anaemias and chlorosis	2												1			1			2		1	1				1	1										1			1
60B. Other diseases of the thyroid gland	1													1					1		1					1						1								
63. Diseases of the adrenals	1										1								1		1					1														1
65B. Lymphadenoma (Hodgkin's disease)	1										1							1				1			1															1
66. Alcoholism (acute or chronic)	1												1					1						1	1								1							
III.—Diseases of the Nervous System.																																									
Group Total	61	5	1	2			1	2			3	1	6	14	15	11		31	30		47	12	1	1	18	30	13			4	3	5	6	11	2	4	6	6	2	5	7
71A. Meningitis	4	2		1			1											2	2		4				4								1	3						
71B. Cerebrospinal meningitis	3		1					1			1								3		2			1	2	1							1	1			1			
73. Other diseases of the spinal cord	4													2	2			3	1		2	1		1		4			1					2	1				
74A. Cerebral haemorrhage, apoplexy	35										1	1	6	8	11	8		17	18		26	9			7	18	10			1	2	2	4	7	1	2	3	3	1	3	6
74B. Cerebral thrombosis and embolism	2			1										1				1	1		2					1						1							1	
75A. Hemiplegia	4													1	2	1		2	2		4					1	3				1		1					1		1
77. Other forms of mental alienation	1															1		1			1					1										1				
78. Epilepsy	1							1											1		1				1											1				
80. Infantile convulsions (under 5 years of age)	3	3																2	1		3				3					2						1				
81. Chorea	1										1								1		1					1											1				
82A. Hysteria and neuralgia	2													1		1		2			1	1				2					2									
84. Other diseases of the nervous system	1													1				1				1				1													1		
IV.—Diseases of the Circulatory System.																																								
Group Total	94	1					1	1	1	3	2	8	16	30	30	1	44	50		64	24	4	2	10	50	34			10	7	9	8	9	6	6	8	6	6	10	9
88. Acute endocarditis and myocarditis	3	1										1	1					2	1		3				2	1					1				1	1				
89. Angina pectoris	5											1		1	2	1		3	2		5				1	3	1			1	1		1	1			1			
90. Other diseases of the heart	52							1	1		3		5	11	17	14		26	26		36	12	3	1	4	33	15			8	2	2	4	5	4	2	5	3	3	7	7
91B. Arterioclerosis	30												1	3	11	14	1	12	18		17	11	1	1	3	10	17				4	6	2	3	2	3	1	2	3	3	1
93. Embolism and thrombosis (not cerebral)	3									1					1		1		1	2		2	1				2	1			1			1							1
94. Diseases of the veins (varicos, haemorrhoid, phlebitis, etc.)	1													1						1		1															1				

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LAMBTON—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
136. Non-venereal diseases of the male genital organs	1															1		1					1			1												1			
VIII.—The Puerperal State																																									
Group Total	4									2	1	1							4		4					4				1	1					1		1			
143c. Other accidents of pregnancy	1											1							1		1					1															
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1										1								1		1					1									1						
148. Puerperal albuminuria and convulsions	1									1									1		1					1				1										
149. Childbirth (without other explanation)	1									1									1		1					1					1										
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	3											1				2		2	1		1		2			1	2			1		1	1							
151. Gangrene	1															1		1					1				1			1										
152. Furuncle	1															1		1					1				1						1							
153. Phlegmon, acute abscess	1												1						1		1					1								1						
XI.—Malformations.																																								
Group Total	7	6	1															4	3		7				7					1			1	2			1		1	1	
159a. Congenital malformations not otherwise specified (still-births excepted)	6	5	1															4	2		6				6					1			1	1			1		1	1	
159b. Hydrocephalus	1	1																	1		1				1									1						
XII.—Diseases of Early Infancy.																																									
Group Total	39	39																20	19		38			1	39					1	2	5	4	6	3	6	2	5	1	2	2
160b. Congenital debility, icterus and scleroma	8	8																6	2		8				8									2	1	2		2		1	
161a. Premature birth	22	22																9	13		22				22							2	3	4	2	3	2	3	1	1	1
161b. Injury at birth	6	6																3	3		6				6					1	1	3								1
162. Other diseases peculiar to early infancy	2	2																1	1		2				2						1				1					
163. Lack of care	1	1																1						1	1							1								
XIII.—Old Age.																																									
164. **Group Total**	28														5	23		13	15		12	14	1	1	1	8	19			1	5	3	3	3	2	2		3	5	1	

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**355**	**51**	**4**	**5**	**1**	**2**	**5**	**2**	**5**	**19**	**15**	**19**	**30**	**52**	**78**	**66**	**1**	**172**	**183**	....	**306**	**43**	**3**	**3**	**129**	**142**	**84**	....	....	**32**	**25**	**23**	**31**	**26**	**27**	**30**	**26**	**38**	**35**	**29**	**33**
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	39	3	1	1	1	..	2	..	..	12	6	3	1	4	2	3	..	14	25	..	36	2	1	..	22	13	4	..	..	4	1	3	6	..	2	6	2	4	6	4	1
1A. Typhoid fever	3	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..
8. Scarlet fever	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
11A. Influenza with pneumonic complications specified	3	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	2	..	3	..	..	1	1	1	..	..	2	..	..	..	..	..	..	..	..	1	..	..
11B. Influenza without pneumonic complications specified	4	..	..	..	..	..	..	..	..	2	..	..	..	1	..	1	..	2	2	..	3	1	..	..	1	2	1	..	..	..	..	1	..	1	1	..	..	1	..	..
16C. Dysentery due to other causes or of unspecified origin	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	1	1	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..
21. Erysipelas	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
25. Purulent infection, septicaemia	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	2	..	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
31. Tuberculosis of the respiratory system	16	..	..	..	..	..	..	..	..	7	5	2	1	..	1	..	..	4	12	..	16	..	..	..	9	7	..	..	..	..	..	1	4	..	2	1	4	3	..	1
31. Tuberculosis of the respiratory 32. Tuberculosis of the meninger and central nervous system generally	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Total deaths from tuberculosis	20	1	1	..	..	..	..	..	..	8	5	2	1	1	1	..	..	7	13	..	20	..	..	..	12	8	..	..	..	2	..	1	4	..	3	1	4	3	1	1
40. Gonococcal infection (opthalmia excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
II.—General Diseases.																																							
Group Total	46	1	1	..	..	1	..	..	..	..	1	7	6	13	12	4	..	21	25	..	35	9	..	2	13	23	10	..	..	5	..	2	3	4	6	6	1	4	6	5	4
44. Malignant tumors of the stomach and liver	8	..	..	..	..	..	..	..	..	..	..	1	..	..	2	4	1	..	3	5	..	4	3	..	1	1	5	2	..	..	1	..	..	..	..	1	2	..	..	..	2	2
45 Malignant tumors of the peritoneum, intestines and rectum	7	..	..	..	..	..	..	..	..	..	..	1	1	1	3	1	..	1	6	..	5	1	..	1	1	4	2	..	..	1	..	1	..	..	1	1	..	1	1	..	1

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	34	10	1	1	..	1	1	..	2	1	2	1	....	6	4	4	..	14	20	..	30	3	1	..	19	8	7	..	..	..	1	2	2	4	1	2	6	8	2	4	2
111A. Ulcer of the stomach	1	..	..	..	..	..	..	..	..	..	..	..	....	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..
112. Other diseases of the stomach (cancer excepted)	5	..	..	..	..	..	1	..	..	..	..	1	....	2	1	..	..	1	4	..	5	..	..	..	1	2	2	..	..	..	..	..	..	1	1	1	..	..	1	..	1
113. Diarrhoea and enteritis (under 2 years)	10	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10	..	..	..	10	..	..	..	..	..	..	..	..	1	..	..	4	3	1	1	..
114. Diarrhoea and enteritis (over 2 years)	5	..	..	1	..	..	..	..	..	..	1	..	..	1	..	2	..	1	4	..	2	2	1	..	3	1	1	..	..	..	..	..	..	..	..	1	3	..	..	1
117. Appendicitis and typhlitis	3	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	3	..	..	3	..	..	..	2	1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..
118B. Intestinal obstruction	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
119A. Diseases of the anus and stercoral fistulae	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..
119B. Other diseases of the intestine	3	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	1	..	3	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1	1	..	..	1	..
123. Biliary calculi	3	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	1	..	2	1	..	..	..	2	1	..	..	..	..	..	..	2	..	..	..	..	..	1	..
124. Other diseases of the liver	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																								
Group Total	20	..	..	..	..	..	..	..	..	2	2	1	3	5	5	2	..	6	14	..	19	1	..	..	1	11	8	..	..	2	1	1	3	2	..	..	1	1	4	..	5
129. Chronic nephritis (Bright's Disease)	17	..	..	..	..	..	..	..	..	2	2	1	3	5	3	1	..	4	13	..	16	1	..	..	1	9	7	..	..	2	1	1	1	2	..	..	1	1	4	..	4
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..
133. Diseases of the bladder	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
135. Diseases of the prostate	1	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
VIII.—The Puerperal State.																																								
Group Total	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
143C. Other accidents of pregnancy	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
151. Gangrene	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
156. Diseases of the bones (tuberculosis and rickets excepted)	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Group Total	**600**	**73**	**8**	**5**	**3**	**1**	**8**	**5**	**7**	**32**	**28**	**36**	**55**	**92**	**149**	**98**	....	**300**	**300**	....	**510**	**57**	**21**	**12**	**210**	**263**	**127**	....	....	**58**	**45**	**48**	**57**	**55**	**49**	**53**	**50**	**29**	**50**	**56**	**50**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	86	6	3	1	..	1	6	2	3	12	14	8	6	5	15	4	..	37	49	..	73	9	3	1	45	34	7	..	..	8	5	10	7	7	7	11	7	3	9	7	5
1A. Typhoid fever	2	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..
7. Measles	3	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	2	..	3	..	..	..	3	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
10. Diphtheria	7	..	..	..	..	1	5	1	..	..	..	..	..	..	..	..	..	3	4	..	6	..	1	..	7	..	..	..	..	..	..	2	..	..	..	..	1	3	1	..
11A. Influenza with pneumonic complications specified	4	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	..	3	1	..	4	..	..	..	2	2	..	..	..	..	..	1	1	..	1	..	..	..	1	..	..
11B. Influenza without pneumonic complications specified	13	3	1	..	..	..	..	..	..	1	..	..	1	..	4	3	..	5	8	..	11	1	1	..	7	2	4	..	..	1	..	5	1	1	..	1	..	..	2	2	..
16C. Dysentery due to other causes or of unspecified origin	5	..	..	1	..	..	..	..	..	..	..	..	..	..	4	..	..	2	3	..	3	2	..	..	1	3	1	..	..	..	..	..	..	..	..	..	2	..	1	1	1
21. Erysipelas	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	3	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	3	..	2	..	1	..	..	3	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..
31. Tuberculosis of the respiratory system	37	..	..	..	..	..	..	..	1	10	12	4	2	3	5	..	..	16	21	..	32	4	..	1	15	20	2	..	..	3	3	2	4	4	5	6	4	2	2	..	2
32. Tuberculosis of the meninges and central nervous system generally	2	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
33. Tuberculosis of the intestines and peritoneum	4	1	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	1	3	..	3	1	..	..	2	2	..	..	..	..	..	..	..	..	1	..	1	1	1	..	..
35. Tuberculosis of the joints	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
37A. Disseminated tuberculosis—acute	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	..	1	1	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	46	1	1	..	..	..	..	..	2	11	12	7	3	4	5	..	..	20	26	..	39	6	..	1	21	23	2	..	..	3	4	2	4	5	5	9	5	3	3	..	3
II.—General Diseases.																																								
Group Total	73	..	..	..	1	..	..	..	2	1	2	6	17	19	18	7	..	30	43	..	63	7	2	1	14	43	16	..	..	5	4	7	10	6	9	3	7	6	7	5	4
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	15	..	..	..	..	..	..	..	..	..	..	2	4	4	4	1	..	6	9	..	11	4	..	..	..	9	6	..	..	1	2	1	2	..	..	..	2	2	1	2	2
45. Malignant tumors of the peritoneum, intestines and rectum	7	..	..	..	..	..	..	..	..	..	..	..	2	1	3	1	..	3	4	..	6	..	1	..	1	5	1	..	..	1	..	1	1	..	..	..	2	..	2	..	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	58	11	1	1			1		1	3	1	1	2	8	21	7		34	24		50	4	1	3	24	20	14			13	4	9	5	3	2		1	4	5	5	7
98. Diseases of the larynx	1			1														1					1			1														1
99A. Bronchitis, acute	2														2				2		2					1	1		1											1
99B. Bronchitis, chronic	3													1	2			2	1		3					1	2						1			1		1		
99C. Bronchitis not otherwise defined under 5 years of age	1	1																	1		1				1							1								
99.D Bronchitis not otherwise defined over 5 years of age	3						1								2	1		2	1		3					3						1					1		1
100A. Broncho-pneumonia	10	6	1				1			1						1		6	4		10				9	1			4	3		1				1		1	
101A. Pneumonia lobar	7													3	2	2		2	5		5	1		1	1	2	4		1		2		1					1	2
101B. Pneumonia not otherwise defined	22	4						1		2			1	3	8	3		14	8		18	1	1	2	11	7	4			5	1	3	2	1	1		3	3	2	1
102. Pleurisy	3													1	2			2	1		2	1				1	2					3								
103. Congestion and haemorrhagic infarct of the lung	2														2			2			2					1	1			1									1	
105. Asthma	3										1	1			1			2	1		2	1			1	2				1				1						1
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	1												1					1			1					1						1								
VI.—Diseases of the Digestive System.																																								
Group Total	34	7	2	2						1		2	2	3	10	5		12	22		31	1		2	14	14	6			3	1		2	4	2	2	6	1	3	5	5
109. Diseases of the pharynx and tonsils including adenoid vegetation)	1	1																	1		1				1														1	
111A. Ulcer of the stomach	1														1				1		1					1							1							
111B. Ulcer of the duodenum	2													1	1			1	1		2				1	1									1		1			
112. Other diseases of the stomach (cancer excepted)	6			1								1		1	3			2	4		5			1	1	5				1		1						3	1
113. Diarrhoea and enteritis (under 3 years)	8	6	2															6	2		8				8				1			1		1		3		1	1	
114. Diarrhoea and enteritis (over 2 yrs.)	4			1										1	1	1		1	3		4				2	1	1									2	1			1
117. Appendicitis and typhlitis	2											1			1				2		2				1	1						1						1		
118A. Hernia	2														1	1			2		2					1	1									1				1
118B. Intestinal obstruction	1									1								1						1		1								1						
119B. Other diseases of the intestine	2														1	1			2		2					1	1						2							
120. Acute yellow atrophy of the liver	1														1				1		1					1			1											
122B. Cirrhosis not returned as alcoholic	1												1					1			1						1								1					
124. Other diseases of the liver	2															2			2		1	1				2			1											1
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1												1						1		1				1															

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LEEDS AND GRENVILLE—Continued.

Number of Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	34	34																15	19		34				34					1	3	4	4	1	4	4	1	3	4	3	2
160B. Congenital debility, icterus and sclerema	16	16																8	8		16				16						2	2	2		1	3		3	1		2
161A. Premature birth	11	11																4	7		11				11							2		1	2	1	1		3	1	
161B. Injury at birth	4	4																2	2		4				4						1		2						1	
162. Other diseases peculiar to early infancy	3	3																1	2		3				3					1				1					1	
XIII.—Old Age.																																									
164. **Group Total**	27													3	5	19		12	15		24	2		1	8	4	15			9	4	2	3	2		1	2	1	2		1
XIV.—External Causes.																																									
Group Total	35	1			2		1	2	1	5	1	6	4	3	4	5		22	13		26	6	3		13	16	6				3	2	1	6	5	5	6		3	2	2
168. Suicide by hanging or strangulation	1									1								1			1				1							1								
169. Suicide by drowning	3											2	1					1	2		2	1			1	2								1				1		1
175. Poisoning by food	1											1						1			1				1	1									1					
178. Conflagration	1														1				1		1				1									1						
179. Burns (conflagration excepted)	1											1							1		1					1									1					
181. Accidental absorption of irrespirable or poisonous gas	1				1													1			1																			
182. Accidental drowning	8	1			1		1	1		2			1	1				4	4		6	1	1		1	2								1	1		6			1	
183. Accidental injury by firearms (war casualties excepted)	2								1			1						2			1		1		1	1														
185. Accidental injury by fall	4										1				1	2		3	1		2	1	1			2	2			1				1	2	1					
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	5							1		1		1	1		1			4	1		4	1			2	2	1						1	1	1	1			1		
188A. Railroad accidents	2									1		1						2			1	1			1	1							1		1					
188C. Automobile accidents	2							1							1			1	1		2				1		1							1				1		
188F. Other accidental injuries by crushing, etc.	1												1					1			1					1							1							
194. Excessive heat	1												1						1		1					1										1				
201C. Fracture (cause not specified	3														1	2		1	2		1	2				1	2								1			1		1
202. Other external violence	4									1				2		1		4			4					3	1			2			1	1						
XV.—Ill-defined Diseases.																																								
Group Total	7	1	1					1				1		3				5	2		7				3	3	1			3	1		1					1		1
205A. Cause of death unstated or ill-defined	7	1	1					1				1		3				5	2		7				3	3	1			3	1		1					1		1

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**186**	**18**	**4**	**2**		**1**	**1**	**3**	**5**	**10**	**8**	**7**	**21**	**28**	**30**	**47**	**1**	**96**	**90**		**158**	**20**	**4**	**4**	**52**	**97**	**36**		**1**	**22**	**21**	**14**	**15**	**12**	**9**	**15**	**20**	**16**	**10**	**16**	**16**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	19	2	..	1	..	..	1	1	1	5	1	..	3	2	2	..	..	8	11	..	17	1	1	..	9	10	..	..	..	..	2	4	1	3	..	2	..	4	1	2	..
10. Diphtheria	2	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
11B. Influenza without pneumonic complications specified	4	1	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	2	2	..	4	..	..	..	1	3	..	..	..	..	2	1	..	..	..	..	..	1	..	..	..
16C. Dysentery due to other causes or of unspecified origin	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	..	1	4	1	..	1	1	..	..	..	3	5	..	7	1	..	..	4	4	..	..	..	..	..	2	1	2	..	2	..	..	1	..
32. Tuberculosis of the meningers and central nervous system generally	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
36D. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Total deaths from tuberculosis	10	..	..	..	..	..	..	1	1	5	1	..	1	1	..	..	..	3	7	..	8	1	1	..	5	5	..	..	..	..	..	2	1	3	..	2	..	1	..	1	..
II. General Diseases.																																								
Group Total	21	..	..	..	..	..	..	..	..	1	3	2	3	4	5	1	..	11	10	..	18	2	..	1	2	15	3	..	1	1	2	1	6	1	..	..	1	2	2	3	2
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
44. Malignant tumors of the stomach and liver	4	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	3	1	..	4	..	..	..	..	4	..	..	..	..	..	..	1	..	..	..	1	2	..	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	..	2	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..
46. Malignant tumors of the female genital organs	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
48. Malignant tumors of the skin	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	1	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	1	..	2	..	..	..	..	2	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..

LENNOX AND ADDINGTON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Total deaths from cancer	12										1	1	2	2	2	4		8	4		11	1			1	9	2			1	1		2				1	2	1	2	2
51. Rheumatic fever	1									1									1		1					1														1	
57. Diabetes	1																1		1					1				1												
58A. Pernicious anaemia	3										1	1		1				3			2	1			1	1	1					2	1							
58B. Other anaemias and chlorosis	1														1				1		1					1						1								
60A. Exophthalmic goitre	2										1			1					2		2					2				1	1									
60B. Other diseases of the thyroid gland	1												1						1		1					1												1		
III.—Diseases of the Nervous System.																																								
Group Total	17	1										1	3	6	2	4		9	8		16	1			5	9	3			2	2	2	1			4	2	2		1	1
71A. Meningitis	1	1																	1		1				1					1										
73. Other diseases of the spinal cord	4											1	1	2				1	3		4				1	1	2								1	2	1			
74A. Cerebral haemorrhage, apoplexy	7												1	2		4		5	2		7					6	1				1				3		1		1	1
75B Other forms of paralysis	4												1	1	2			2	2		3	1			2	2				1	1	1	1							
82B. Neuritis	1													1				1			1				1							1								
IV.—Diseases of the Circulatory System.																																								
Group Total	27									1		1	2	4	8	11		13	14		23	3		1	3	16	8			2	4	2	2	3	2	1	1	2	3	4	1
90. Other diseases of the heart	15											1	1	2	6	5		6	9		15				2	10	3			1	4		2	1		1		1	2	2	1
91A. Aneurism	1																	1			1				1									1							
91B. Arteriosclerosis	11												1	2	2	6		6	5		7	3		1		6	5			1		2		1	2		1	1	1	2	
V.—Diseases of the Respiratory System.																																								
Group Total	18	1	1				1					2	2	2	4	5		10	8		15	2	1		4	10	4			8	2	2	1	1	2				1	1
99C. Bronchitis not otherwise defined under 5 years of age	1	1																1			1				1					1										
99D. Bronchitis not otherwise defined over 5 years of age	4													1	3			1	3		2	2				1	3			2	1			1						
100A. Broncho-pneumonia	4		1									1	2					2	2		4				1	2	1			1		2	1							
101A. Pneumonia lobar	2													1	1			1	1		2					2				1				1						
101B. Pneumonia not otherwise defined	7							1				1		1	2	2		5	2		6		1		2	5				3	1	1						1	1
VI.—Diseases of the Digestive System.																																								
Group Total	17	2	2			1							3	1	3	5		13	4		14	1	1	1	5	8	4			3				1	1		4	4	1	2	1
112. Other diseases of the stomach (cancer excepted)	6												2	1	2	1		4	2		4	1	1			5	1			2					1			2		1	
113. Diarrhoea and enteritis (under 2 years)	4	2	2															4			4				4					1				1			1			1
114. Diarrhoea and enteritis (over 2 years)	3					1										2		3			2			1	1	2										1	1		1	

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LENNOX AND ADDINGTON—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIV.—External Causes.																																									
Group Total	20	1	1	1	..	..	..	..	3	2	2	1	3	2	3	1	..	11	9	..	16	3	1	..	8	10	2	..	..	1	..	..	..	1	3	7	5	..	..	..	3
177. Other acute accidental poisonings	2	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..
180. Accidental mechanical suffocation	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
182. Accidental drowning	8	..	..	1	..	..	..	..	3	2	2	..	..	..	..	..	..	5	3	..	8	..	..	..	5	3	..	..	..	..	..	..	..	..	1	1	4	..	..	..	2
185. Accidental injury by fall	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
194. Excessive heat	4	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	1	3	..	3	1	..	..	..	4	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..
196. Electricity (lightning excepted)	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
197. Homicide by firearms	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
201c. Fracture (cause not specified)	.. 2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	1	..	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1
XV.—Ill-defined Diseases.																																								
Group Total	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
205a. Cause of death unstated or ill-defined	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	293	42	7	2	2	1	11	5	7	15	5	16	26	46	60	45	3	151	142		225	38	23	7	105	121	64		3	23	30	30	30	21	19	32	16	22	35	17	18
I. Endemic, Epidemic and Infectious Diseases.																																								
Group Total	45	7	4	1	1	1	6	4	1	7	..	4	2	2	4	1	..	18	27	..	41	1	3	..	31	13	1	..	..	4	2	6	6	3	3	4	3	5	6	1	2
1A. Typhoid fever	4	..	..	..	..	..	..	2	..	1	..	..	..	1	..	..	..	3	1	..	4	..	..	..	3	1	..	..	..	..	..	..	..	..	..	1	1	2	..	..
1B. Paratyphoid fevers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
8. Scarlet fever	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
9. Whooping cough	8	5	2	1	..	..	..	..	..	..	..	..	2	6	..	..	..	7	..	1	..	..	8	..	..	..	..	..	..	1	2	1	1	1	..	1	..	..	..	..
10. Diphtheria	9	1	1	..	1	..	4	2	..	..	..	..	2	7	..	..	..	9	..	..	9	..	..	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	3	1	1
11A. Influenza with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	13	..	..	..	..	..	..	..	..	5	..	4	1	..	3	..	..	6	7	..	11	1	1	..	4	8	1	..	..	3	..	1	2	2	..	2	1	1	..	..	1
32. Tuberculosis of the meninges and central nervous system generally	5	1	..	..	..	1	..	..	1	1	..	..	1	..	..	..	..	2	3	..	4	..	1	..	4	1	..	..	..	..	..	..	1	..	1	1	1	..	1	..	..
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	19	1	1	..	..	1	..	..	1	6	..	4	2	..	3	..	..	9	10	..	16	1	2	..	9	9	1	..	..	3	..	2	3	2	1	3	2	1	1	..	1
II. General Diseases.																																								
Group Total	36	..	..	..	..	..	..	..	..	..	..	5	7	7	12	5	..	18	18	..	24	7	5	..	3	21	12	..	..	1	5	3	6	2	3	4	..	2	3	4	3
44. Malignant tumors of the stomach and liver	9	..	..	..	..	..	..	..	..	..	..	2	1	2	3	1	..	5	4	..	43	2	3	..	..	6	3	..	..	..	..	..	1	2	1	..	2	..	1	..	2	..
45. Malignant tumors of the peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	1	2	..	2	1	..	..	1	2	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..
46. Malignant tumors of the female genital organs	4	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	4	..	3	..	1	..	3	1	..	..	..	..	..	1	..	1	1	..	..	..	..	..	1
48. Malignant tumors of the skin	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	2	..	..	..	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	9	..	..	..	..	..	..	..	..	..	..	..	1	1	5	2	..	5	4	..	7	1	1	..	2	5	2	..	..	1	1	..	3	..	..	..	..	1	3	..	..
Total deaths from cancer	27	..	..	..	..	..	..	..	..	..	..	3	3	7	10	4	..	13	14	..	18	4	5	..	2	16	9	..	..	1	4	2	5	2	2	2	..	2	3	3	1

LINCOLN—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
51. Rheumatic fever	1											1						1			1						1			1										
52. Chronic rheumatism, osteo-arthritis. gout	3												1		1	1		2	1		1	2				1	2							1	1				1
57. Diabetes	2												1		1				2		2					1	1				1		1					1	
58A. Pernicious anaemia	1											1						1				1				1													
60B. Other diseases of the thyroid gland	1												1						1			1			1								1						
66. Alcoholism (acute or chronic)	1												1					1				1				1													1
III.—Diseases of the Nervous System.																																								
Group Total	20	1							1	2	1		2	9	3	1		10	10		18	1		1	3	12	5			2	1		3	3	2	2		1	3	1	2
71A. Meningitis	2								1	1									2		2				1	1							1							1
73. Other diseases of the spinal cord	1													1					1		1					1								1						
74A. Cerebral haemorrhage, apoplexy	11	1											1	6	2	1		7	4		9	1		1	1	5	5			2			2	1		1		1	2	1	1
75A. Hemiplegia	2													2					2		2					2								1	1				1		
75B. Other forms of paralysis	2												1		1			1	1		2					2															
78. Epilepsy	1									1								1			1					1				1										
84. Other diseases of the nervous system	1								1									1			1				1										1					
IV.— Diseases of the Circulatory System.																																								
Group Total	51	1							2			1	4	12	18	13		25	26		40	5	4	2	7	24	20			1	5	5	3	6	6	6	3	3	8	2	3
88. Acute endocarditis and myocarditis	1											1						1			1				1										1					
90. Other diseases of the heart	29								2				3	9	12	3		11	18		21	3	3	2	3	15	11			1	3	3	1	3	4	3	3	2	4		2
91B. Arteriosclerosis	17												1	3	5	8		10	7		14	2	1		1	9	7				1	2	2	3	2	2		1	2	2	
92. Atheroma and other diseases of the arteries	2														1	1		1	1		2				1		1				1									1
93. Embolism and thrombosis (not cerebral)	2	1														1		2			2				1		1											2		
V.—Diseases. of Respiratory System																																							
Group Total	32	5	2	1			2					4	3	4	6	5		19	13		27	4	1		13	14	5			4	6	6	5				1	2	5	3
99A. Bronchitis, acute	1															1		1			1				1						1							1	
99B. Bronchitis, chronic	1												1						1		1						1				1								
99C. Bronchitis not otherwise defined under 5 years of age	1	1																1			1				1								1							
99D. Bronchitis not otherwise defined over 5 years of age	3														2	1		1	2		2	1				1	2			1			2							
100A. Broncho-pneumonia	9	2	1	1			2								1	2		5	4		8	1			7	1	1			1	2		1					1		3
101A. Pneumonia lobar	5	1											1	1	2			3	2		3	1	1		2	3				1			1				1		2	
101B. Pneumonia not otherwise defined	10	1	1										1	2	1	1		8	2		9	1			2	7	1			1	3	3						1	2	
105. Asthma	1											1							1		1					1						1							
106. Pulmonary emphysema	1													1					1		1					1													

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LINCOLN—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	13	13																8	5		13				13					1	1	2			1	3		3	2		
160B. Congenital debility, icterus and scleroma	3	3																2	1		3				3											1		2			
161A. Premature birth	8	8																5	3		8				8					1	1	1			1	2		1	1		
161B. Injury at birth	1	1																	1		1				1							1									
162. Other diseases peculiar to early infancy	1	1																1			1				1													1		
XIII.—Old Age.																																								
164. **Group Total**	19														7	12		9	10		8	10	1		2	5	11		1	5	1	2	1	1	3	1	1	1	2		1
XIV.—External Causes.																																								
Group Total	28	1			1		2	1	1	6	2	2	3	4	1	2	2	19	9		19	5	2	2	12	13	1		2		3		3	3	1	5	3	2	4	2	2
170. Suicide by firearms	1										1							1			1					1												1		
179. Burns (conflagration excepted)	3							1					1	1					3		3				1	2						1	1			1				
182. Accidental drowning	6				1				1	1	1		1				1	6			2	2	1	1	3	2			1			1	1		2		1		1	
183. Accidental injury by firearms (war casualties excepted)	2												1				1	2			1			1		1			1				1				1			
185. Accidental injury by fall	4						1			2				1				2	2		4				2	2					1		1				1	1		
186B. Accidental injury by quarries	2									2								2			1		1		2										1		1			
187. Accidental by machinery	1																	1			1					1											1			
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	3						1								1	1		2	1		2	1			2		1				2					1				
188A. Railroad accidents	1															1		1			1						1				1									
188C. Automobile accidents	2						1								1			1	1		1	1			2						1					1				
189. Injury by animals (poisoning excepted)	1													1					1		1					1													1	
194. Excessive heat	2	1										1						1	1		2				1	1										2				
196. Electricity (lightning excepted)	1									1								1			1				1										1					
201C. Fracture (cause not specified)	2													1		1		1	1			2				2										1				1
XV.—Ill-defined Diseases.																																								
Group total	2	1							1									1	1		2				2							1				1				
205A. Cause of death unstated or ill-defined	2	1							1									1	1		2				2							1				1				

CAUSES OF DEATH IN THE DISTRICT OF MANITOULIN, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Month.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**119**	**24**	**8**	**3**			**5**	**2**	**6**	**3**	**4**	**6**	**10**	**16**	**13**	**18**	**1**	**68**	**51**		**92**	**17**		**10**	**57**	**37**	**24**	**1**		**14**	**10**	**16**	**14**	**6**	**11**	**11**	**7**	**9**	**6**	**5**	**10**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	19	2	2	1			1	2	3	1	3	2			2			11	8		16	2		1	13	6				1	4	1	1	2	1	1	2		1	2	3
7. Measles	1														1				1			1			1					1										
8. Scarlet fever	1		1															1			1				1								1							
9. Whooping cough	1	1																1			1				1								1							
10. Diphtheria	2		1				1											1	1		2				2													1	1	
11A. Influenza with pneumonic complications specified	1										1							1				1				1					1									
11B. Influenza without pneumonic complications specified	5	1							1			2			1			4	1		5				3	2					3		1							1
29. Tetanus	1			1														1			1				1										1					
31. Tuberculosis of the respiratory system	7							2	2	1	2							3	4		6			1	5	2				1			1	1	1				1	2
Total deaths from tuberculosis	7							2	2	1	2							3	4		6			1	5	2				1			1	1	1				1	2
II.—General Diseases.																																								
Group Total	11	1											5	5				5	6		10			1	1	8	2			1	1	2	2		1	1		2			1
44. Malignant tumors of the stomach and liver	4												2	2				3	1		4					4							1					2			1
45. Malignant tumors of the peritoneum, intestines and rectum	1												1						1		1						1			1										
46. Malignant tumors of the female genital organs	3												1	2					3		3					3			1		1		1							
47. Malignant tumors of the breast	1													1					1		1						1					1								
Total deaths from cancer	9												4	5				3	6		9					7	2		1	1	1	2		1			2			1
56. Rickets	1	1																1			1				1						1									
58B. Other anaemias and chlorosis	1												1					1						1		1									1					

MANITOULIN—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System.																																									
Group Total	6	..	1	1	..	..	..	..	..	..	..	..	..	1	2	1	..	5	1	..	4	..	..	2	3	1	2	..	..	1	1	..	1	..	1	..	..	..	1	1	..
74A. Cerebral haemorrhage, apoplexy	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	2	..	..	1	1	1	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..
75B. Other forms of paralysis	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
80. Infantile convulsions (under 5 years years of age)	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..
IV.—Diseases of the Circulatory System.																																								
Group Total	4	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	1	3	..	3	..	..	1	1	3	..	..	..	1	..	..	..	1	1	..	..	..	1	..	..
88. Acute endocarditis and myocarditis	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
90. Other diseases of the heart	3	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	3	..	2	..	..	1	..	3	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..
V.—Diseases of the Respiratory System.																																								
Group Total	18	1	..	..	..	..	2	..	2	1	2	..	3	3	1	3	..	14	4	..	14	3	..	1	8	6	4	..	..	4	2	4	2	1	2	1	..	..	1	..	1
99A. Bronchitis, acute	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	1	..	1	2	..	..	1	..	2	..	..	2	..	..	..	..	1	..	..	..	..	..	..
99D. Bronchitis, not otherwise defined, over 5 years of age	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	1	1	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..
101A. Pneumonia lobar	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..
101B. Pneumonia, not otherwise defined	6	..	..	..	..	..	1	..	1	..	1	..	1	2	..	..	..	4	2	..	6	..	..	..	3	2	1	..	..	..	1	3	1	1	..	..	..	..	..	..
102. Pleurisy	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	3	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	3	..	..	2	..	..	1	..	3	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
VI.—Diseases of the Digestive System.																																								
Group Total	8	4	1	..	..	..	1	..	..	..	1	..	..	..	1	..	..	3	5	..	7	1	..	..	8	..	..	..	..	1	..	..	..	..	1	..	..	4	..	1	1
108B. Other diseases of the buccal cavity and its annexa	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
112. Other diseases of the stomach (cancer excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
113. Diarrhoea and enteritis (under 2 years)	4	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4	..	..	..	4	..	..	..	..	1	..	..	..	..	..	..	..	2	..	1	..
114. Diarrhoea and enteritis (over 2 years)	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
119B. Other diseases of the intestine	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..

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CAUSES OF DEATH IN THE COUNTY OF MIDDLESEX, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**558**	**66**	**5**	**1**	**4**	**1**	**8**	**7**	**7**	**33**	**33**	**25**	**53**	**96**	**114**	**105**		**299**	**259**		**400**	**115**	**16**	**27**	**186**	**244**	**128**			**45**	**52**	**44**	**44**	**51**	**37**	**40**	**58**	**46**	**50**	**45**	**46**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	82	6	2	1	2	..	3	2	4	21	14	4	9	4	7	3	..	59	23	..	59	11	2	10	49	29	4	..	..	4	10	7	3	5	10	3	10	6	11	6	7
1A. Typhoid fever	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	2	..	..	1	..	1	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..
8. Scarlet fever	2	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
9. Whooping cough	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..
10. Diphtheria	7	1	..	..	2	..	2	2	..	..	..	..	..	..	..	..	..	4	3	..	7	..	..	..	7	..	..	..	..	1	2	1	..	..	..	1	..	..	1	..
11A. Influenza with pneumonic complications specified	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11B. Influenza without pneumonic complications specified	3	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	2	..	2	1	..	..	..	2	1	..	..	..	..	..	..	..	1	..	..	1	..	1
15. Cholera nostras	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
16c. Dysentery, due to other causes, or or unspecified origin	2	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	1	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..
21. Erysipelas	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	3	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	2	1	..	2	1	..	..	1	2	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1
29. Tetanus	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	50	1	1	..	..	..	..	..	3	18	13	2	6	2	3	1	..	41	9	..	31	8	1	10	29	19	2	..	..	1	4	4	2	5	3	2	9	6	6	4	4
32. Tuberculosis, meninges and central nervous system generally	3	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	..
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Total deaths from tuberculosis	54	1	1	1	..	..	..	..	4	19	13	2	6	3	3	1	..	43	11	..	35	8	1	10	32	20	2	..	..	1	4	5	2	5	6	2	9	6	6	4	4
II.—General Diseases.																																								
Group Total	65	..	..	..	..	2	1	..	..	..	5	4	12	17	18	6	..	25	40	..	50	10	1	4	14	40	11	..	..	4	4	6	5	6	6	7	6	9	2	5	5
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
44. Malignant tumors, stomach and liver	10	..	..	..	..	..	..	..	..	..	1	..	1	2	3	3	..	6	4	..	7	3	..	..	1	5	4	..	..	..	..	2	1	2	..	2	2	..	..	..	1
45. Malignant tumors, peritoneum, intestines and rectum	7	..	..	..	..	..	..	..	..	..	..	..	2	1	4	..	..	1	6	..	5	1	1	..	5	2	..	..	..	1	..	1	1	..	2	1	..	..	..	..	1

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MIDDLESEX—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	43	4				1				2	2	1	3	9	10	11		21	22		32	11			6	22	15			9	4	4	3	3	3	1		2	4	4	6
99A. Bronchitis, acute	3														1	2		2	1		1	2				2	1			1											2
99D. Bronchitis, not otherwise defined, over 5 years of age	2													1		1		2			1	1				1	1			1					1						
100A. Broncho-pneumonia	5	1														4		1	4		2	3			1	2	2			2		1						2			
100B. Capillary, bronchitis	1	1																1			1				1						1										
101A. Pneumonia lobar	5					1				1	1				2			2	3		5				1	4					1	1		1						1
101B. Pneumonia, not otherwise defined	24	2								1	1	1	3	6	4	6		10	14		19	5			3	11	10			5	3	1	2	2	1	1		1	1	4	3
103. Congestion and haemorrhagic infarct of the lung	2													1	1			2			2					1	1					1		1						
105. Asthma	1														1			1			1					1													1		
VI.—Diseases of the Digestive System.																																									
Group Total	49	13	1		1		1	3	2		1	1	3	8	5	10		24	25		36	8	3	2	24	14	11				5	2	2	2	2	6	8	7	4	6	5
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	6	1			1			2	1					1				2	4		5		1		5	1				1	1	1		1	1					1
110. Diseases of the oesophagus	1													1					1		1					1									1						
111A. Ulcer of the stomach	4												2	2				3	1		3		1			3	1								1	1			1	1	
112. Other diseases of the stomach (cancer excepted)	2							1								1			2		1			1	1		1			1				1						
113. Diarrhoea and enteritis (under 2 years)	12	11	1															7	5		12				12										1	5	3	1	1	1
114. Diarrhoea and enteritis (over 2 years)	12													1	3	8		6	6		5	7			2	4	6				1	1		1		1	3	1	2	2
116E. Other parasities of the intestines	1						1											1			1				1						1									
117. Appendicitis and typhlitis	1								1									1			1				1													1		
118B. Intestinal obstruction	2	1												1					2		2				1	1						1			1					
123. Biliary calculi	1														1				1		1						1									1				
124. Other diseases of the liver	7										1	1	1	2	1	1		4	3		4	1	1	1	1	4	2			1			1		1		1	1	2	
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	33									1	1	2	6	5	10	8		17	16		23	5	4	1	3	18	12			1	5	4	5	2		2	2	4	4	1	3
128. Acute nephritis	3									1			1	1				2	1		1	1	1		1	1	1			1						1	1			
129. Chronic nephritis (Bright's disease)	22										1	2	5	3	7	4		7	15		16	3	2	1	2	11	9				4	3	3	2		1	2	3	3	1	
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	3														2	1		3			2	1				2	1					1				1				1
133. Diseases of the bladder	3														1	2		3			2		1			2	1				1		1							1
135. Diseases of the prostate	2													1		1		2			2					2														1

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MIDDLESEX—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
170 Suicide by firearms	1													1				1			1					1													1	
174. Other suicides	1													1				1			1	1				1													1	
177. Other acute accidental poisonings	1											1						1			1				1				1				1						
179 Burns (conflagration excepted)	1													1					1		1					1													
182. Accidental drowning	1		1															1			1				1								1						
185. Accidental injury by fall	2													1		1		1	1		1	1			1		1							1				1	
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	6				1					1		2	1		1			5	1		3	3			3	3				1				2	1	1			1
188A. Railroad accidents	1											1						1				1			1										1				
188B. Street car accidents	1											1							1		1					1								1					
188C. Automobile accidents	2				1								1					2			1	1			1	1								1		1			
188F. Other accidental injuries by crushing, etc.	2									1					1			2			1	1			1	1				1									1
194 Excessive heat	2											1	1					2				2				2									2					
197. Homicide by firearms	1										1							1			1				1														
201C. Fracture (cause not specified)	8									1					4	3		3	5		2	5		1	2	4	2			1	1	1	1		1	1	1		1	
202. Other external violence	7							1			1				1	4		6	1		5	2			1	3	3				1		1	1	1	1		2		
XV.—Ill-defined Diseases.																																							
Group Total	12	2										1		7	2			6	6		10	2			2	4	6				1	3	1	1	1	2	1		1	1	
204. Sudden death	3													2	1			2	1		1	2				1	2					1	1						1	
205A. Cause of death unstated or ill-defined	9	2										1		5	1			4	5		9				2	3	4				1	2		1	1	2	1		1		

CAUSES OF DEATH IN THE COUNTY OF MUSKOKA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	208	28	2	3	3	2	9	6	3	23	27	13	21	20	20	28	.	107	101	.	140	46	13	9	97	81	30	.	.	17	15	19	16	21	10	16	29	20	13	12	20
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	67	4	1	..	2	1	6	3	1	17	17	5	7	3	.	.	.	36	31	.	51	7	7	2	37	28	2	.	.	3	5	8	9	4	4	7	9	7	2	5	4
1A. Typhoid fever	2	.	..	..	.	.	1	.	.	.	.	1	.	.	.	.	.	1	1	.	2	.	.	.	2	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.
6. Smallpox	1	.	..	..	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
7. Measles	2	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	2	.	.	.	2	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.
8. Scarlet fever	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
9. Whooping cough	3	3	.	.	.	.	..	.	.	.	.	.	.	.	.	.	.	2	1	.	3	.	.	.	3	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	.
10. Diphtheria	5	.	.	.	.	1	2	2	.	.	.	.	.	.	.	.	.	1	4	.	5	.	.	.	5	.	.	.	.	.	1	.	.	.	.	1	3	.	.	.	.
11A. Influenza with pneumonic complication specified	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
11B. Influenza without pneumonic complications specified	4	.	.	.	1	.	1	.	.	.	.	.	2	.	.	.	.	.	4	.	4	.	.	.	2	1	1	.	.	.	1	1	1	.	.	1	.	.	.	.	.
16C. Dysentery due to other causes or of unspecified origin	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
25. Purulent infection, septicaemia	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
31. Tuberculosis of the respiratory system	45	.	.	.	.	.	.	.	1	16	17	4	6	1	.	.	.	29	16	.	30	6	7	2	19	25	1	.	.	1	3	4	6	2	2	4	6	6	2	5	4
32. Tuberculosis of the meninges and central nervous system generally	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Total deaths from tuberculosis	46	.	.	.	.	.	.	.	1	17	17	4	6	1	.	.	.	29	17	.	31	6	7	2	19	26	1	.	.	2	3	4	6	2	2	4	6	6	2	5	4
II.—General Diseases.																																								
Group Total	11	.	.	.	.	.	.	.	.	2	.	3	3	2	1	.	.	4	7	.	7	3	.	1	1	9	1	.	.	3	2	.	.	.	.	1	1	.	.	2	2
45. Malignant tumors of the peritoneum, intestines and rectum	1	.	..	.	.	.	.	.	.	.	.	.	.	1	.	.	.	..	1	.	.	1	.	.	..	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
47. Malignant tumors of the breast	3	.	..	..	..	.	..	..	.	..	..	1	2	..	.	..	.	.	3	.	2	1	.	.	.	3	.	.	.	2	.	.	.	.	.	1	.	.	.	.	.
Total deaths from cancer	4	.	.	.	.	.	.	.	.	.	.	1	2	..	1	.	.	.	4	.	3	2	.	.	.	4	.	.	.	2	.	.	.	.	.	.	1	1	.	.	.	.
51. Rheumatic fever	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
57. Diabetes	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
58A. Pernicious anaemia	2	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	1	.	2	.	.	.	.	1	1	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
58B. Other anaemias and cholrosis	1													1				1			1					1															1
60A. Exophthalmic goitre	1											1						1						1		1				1											
63. Other diseases of the adrenals	1									1								1			1				1															1	
III.—Diseases of the Nervous System.																																									
Group Total	16	1								1	1	2	3	2	2	4		5	11		12	2	1	1	3	10	3			1	1	2			1	1	5	1	2		2
71B. Cerebrospinal meningitis	1	1																1						1	1																1
73. Other diseases of the spinal cord	1													1				1			1					1								1							
74A. Cerebral haemorrhage, apoplexy	12									1	1	1	3	1	1	4		3	9		10	1	1		2	8	2				1	1			1	5	1	2		1
75A. Hemiplegia	1													1					1			1					1			1										
86. Diseases of the ears	1											1							1		1					1					1										
IV.—Diseases of the Circulatory System.																																									
Group Total	25									1			2	5	10	7		13	12		9	15	1		4	9	12			2	2			7	3	2	3	2	2		2
90. Other diseases of the heart	21									1			2	4	8	6		11	10		6	14	1		3	8	10			2	2			6	2	1	3	2	1		2
91B. Arteriosclerosis	4													1	2	1		2	2		3	1			1	1	2							1	1	1			1		
V.—Diseases of the Respiratory System.																																									
Group Total	12			1		1		1		1		1	1	3	2	1		5	7		7	3	1	1	5	6	1				3	2	1	3			2				1
99B. Bronchitis, chronic	1														1				1		1					1								1							
99D. Bronchitis not otherwise defined over 5 years of age	3													1	1	1		2	1		2	1				2	1					1	1				1				
101A. Pneumonia lobar	3							1					1	1				1	2		1	2			2	1				2			1								
101B. Pneumonia not otherwise defined	4			1						1		1		1				1	3		2		1	1	2	2				1	1		1							1
102. Pleurisy	1					1												1			1				1											1				
VI.—Diseases of the Digestive System.																																									
Group Total	22	6	1	1	1		3	2			3		2	1	1	1		13	9		18	3		1	16	4	2			1			1	3	1		6	4	3		3
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1							1											1		1				1											1				
112. Other diseases of the stomach (cancer excepted)	1															1		1				1					1									1				
113. Diarrhoea and enteritis (under 2 yrs.)	6	5	1															4	2		6				6					1			1	1		1				2
114. Diarrhoea and enteritis (over 2 yrs.)	5			1			1				2		1					4	1		4			1	3	2								1		3		1		
117. Appendicitis and typhlitis	4				1		1	1					1					2	2		4				4										1		1		1	
118B. Intestinal obstruction	2	1					1											2			2				2											1	1			
119B. Other diseases of the intestine	1														1				1			1				1														

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MUSKOKA—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIV.- External Causes.																																									
Group Total	16	1	..	1	..	..	..	..	2	1	4	1	2	1	..	3	..	10	6	..	10	4	..	2	12	3	1	..	..	1	..	1	2	..	1	4	2	..	1	2	2
166. Suicide by corrosive substances	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
179. Burns (conflagration excepted)	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
182. Accidental drowning	5	..	..	..	..	..	..	..	2	..	2	..	1	..	..	..	..	3	2	..	2	2	..	1	4	1	..	..	..	..	1	1	..	..	2	1	..	..	..	..
183. Accidental injury by firearms (war casualties excepted)	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
188A. Railroad accidents	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
194. Excessive heat	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
197. Homicide by firearms	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
201c. Fracture (cause not specified)	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..
202. Other external violence	2	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
XV.—Ill-Defined Diseases.																																								
Group Total	5	1	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	3	2	..	2	3	..	..	2	3	..	..	..	..	..	1	..	..	..	1	1	..	1	1
204. Sudden death	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
205A. Cause of death unstated or ill-defined	3	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	1	..	1	2	..	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1

CAUSES OF DEATH IN THE COUNTY OF NIPISSING, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**289**	**109**	**8**	**6**	**8**	**4**	**10**	**12**	**4**	**20**	**20**	**17**	**12**	**26**	**18**	**13**	**2**	**161**	**128**		**255**	**8**	**16**	**10**	**185**	**82**	**22**			**37**	**23**	**19**	**30**	**15**	**25**	**29**	**31**	**24**	**24**	**16**	**16**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	36	1	1	2	4	..	7	1	2	4	7	3	1	2	1	..	..	18	18	...	32	1	3	..	19	16	1	..	..	5	3	5	3	1	5	5	3	2	..	3	1
1A. Typhoid fever	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	2	...	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
10. Diptheria	10	..	1	1	3	..	4	..	1	..	..	..	..	..	..	..	..	6	4	...	9	..	1	..	10	..	..	..	..	3	..	1	..	..	3	..	2	..	1	..
11B. Influenza, without pneumonic complications specified	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
15. Cholera nostras	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
31. Tuberculosis of the respiratory system	18	..	..	1	..	..	..	1	1	3	5	3	1	2	1	..	..	8	10	...	15	1	2	..	4	13	1	..	..	1	2	2	3	1	2	2	3	..	..	1	1
32. Tuberculosis, meninges and central nervous system generally	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	...	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
37B. Disseminated tuberculosis, chronic	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	22	1	..	1	..	..	1	1	1	3	7	3	1	2	1	..	..	11	11	...	19	1	2	..	6	15	1	..	..	2	3	3	3	1	2	2	3	..	..	2	1
II.—General Diseases.																																								
Group Total	25	5	..	..	..	..	1	2	..	1	1	3	4	6	2	..	..	12	13	..	21	1	3	..	11	13	1	..	..	..	4	..	1	1	..	4	7	4	1	2	1
44. Malignant tumors, stomach and liver	6	..	..	..	..	..	..	..	..	1	..	1	1	2	1	..	..	4	2	...	5	..	1	..	1	5	..	..	..	..	1	..	..	..	..	2	1	..	..	2	..
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
48. Malignant tumors, skin	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	5	..	..	..	..	..	..	..	..	..	..	2	1	2	..	..	..	3	2	...	3	1	1	..	1	4	..	..	..	..	..	..	..	..	..	1	1	2	1	..	..
Total deaths from cancer	13	..	..	..	..	..	..	..	..	1	..	3	4	4	1	..	..	8	5	...	10	1	2	..	2	11	..	..	..	..	1	..	1	1	..	3	2	2	1	2	..
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
51. Rheumatic fever	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	...	2	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
52. Chronic rheumatism, osteo-arthritis, gout	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	...	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..

NIPISSING—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
53. Scurvy	1	1																	1		1				1												1				
56 Rickets	3	3																1	2		3				3												1	2				
57. Diabetes	2										1			1				1	1		1		1		1	1				1							1				
58B. Other anaemias and chlorosis	1														1				1		1					1											1				
69. Other general diseases	1	1																1			1				1												1				
III.—Diseases of the Nervous System.																																								
Group Total	21	6	1		1	1				3			2	2	3	1	1	10	11		19	1		1	13	6	2			4		2			4	1	2	1	1	3	3
71A. Meningitis	5	2			1	1				1								2	3		5				5					1					2		1				1
73. Other diseases of the spinal cord	1									1								1			1				1					1											
74A. Cerebral haemorrhage, apoplexy	8	1											2	2	1	1	1	5	3		7			1	2	4	2			2		1			1		1			1	2
75A. Hemiplegia	1														1			1				1			1															1	
75B. Other forms of paralysis	1														1				1		1					1											1				
80. Infantile convulsions (under 5 years of age)	3	2	1															1	2		3				3						1			1				1		
86A. Diseases of the ears	2	1								1									2		2				1	1									1				1		
IV.—Diseases of the Circulatory System.																																								
Group Total	25									2	3	4	1	6	6	3		15	10		18	2	3	2	4	13	8			4	6	1	4	1	2	1	1	2	3		
88. Acute endocarditis and myocarditis	3									1	2							2	1		3				1	2					1						2			
90. Other diseases of the heart	16									1	1	4		5	4	1		10	6		12	1	2	1	2	10	4			3	4		4	1	1	1		1	1		
91B. Arteriosclerosis	6												1	1	2	2		3	3		3	1	1	1	1	1	4			1	2				1	1					
V.—Diseases of the Respiratory System.																																									
Group Total	27	15	2	1	1			3				1	1		2	1		14	13		26			1	22	5				8	3	2	6	1	1	2	1		1		2
98. Diseases of the larynx	1	1																1			1				1								1								
99C. Bronchitis, not otherwise defined, under 5 years of age	3	3																1	2		3				3					1	1		1							
99D. Bronchitis, not otherwise defined, over 5 years of age	2							1								1		1	1		1			1	1	1			1								1			
100A. Broncho-pneumonia	9	6	1	1										1				4	5		9				8	1			1	1	1	2	1		1	1				1
101A. Pneumonia lobar	2		1									1						1	1		2				1	1			1					1						
101B. Pneumonia, not otherwise defined	8	4			1			1					1		1			4	4		8				6	2			2	1	1	2			1					1
103. Congestion and haemorrhagic infarct of the lung	2	1						1										2			2				2				2											

| | | |

NIPISSING—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	48	48	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	20	...	48	..	..	..	48	..	..	..	..	4	2	3	4	3	7	7	2	5	4	3	4
160B. Congenital debility, icterus and scleroma	18	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	...	18	..	..	..	18	..	..	..	..	1	1	1	..	1	2	3	1	3	1	1	3
161A. Premature birth	21	21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	10	...	21	..	..	..	21	..	..	..	..	2	1	2	2	1	4	3	1	1	2	1	1
161B. Injury at birth	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	...	5	..	..	..	5	..	..	..	..	1	..	..	..	..	1	1	..	1	..	1	..
162. Other diseases peculiar to early infancy	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	...	4	..	..	..	4	..	..	..	..	..	..	..	2	1	..	..	..	..	1	..	..
164. XIII.—Old Age.																																								
Group Total	7	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	..	5	2	...	6	..	..	1	2	1	4	..	..	2	..	1	..	..	1	..	..	2	1	..	..
XIV.—External Causes.																																								
Group Total	25	..	..	1	1	..	..	2	2	5	4	3	3	3	1	..	..	21	4	...	18	3	2	2	14	8	3	..	..	4	..	..	4	3	2	4	1	1	2	3	1
165. Suicide by solid or liquid poisons	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	...	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..
177. Other acute accidental poisonings	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	...	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
179. Burns (conflagration excepted)	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
180. Accidental mechanical suffocation	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	...	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
182. Accidental drowning	8	..	..	..	..	..	..	..	2	3	1	..	1	1	..	..	..	8	..	...	6	..	1	1	6	1	1	..	..	..	..	..	3	2	..	1	..	1	1	..	..
183. Accidental injury by firearms (war casualties excepted)	2	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	...	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
185. Accidental injury by fall	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
187. Accidental injury by machinery	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	...	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Other forms of crushing (Vehicles, Railways, Landslides, etc.)	6	..	..	..	..	..	..	1	..	1	1	1	1	..	1	..	..	5	1	...	4	1	..	1	3	3	..	..	..	3	..	..	..	..	1	..	..	..	..	1	1
188A. Railroad accidents	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	...	1	1	..	..	..	2	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..
188F. Other accidental injuries by crushing, etc.	4	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	4	..	...	3	..	..	1	3	1	..	..	..	2	..	..	..	..	..	..	..	..	..	1	1
194. Excessive heat	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
195. Lightning	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
201C. Fracture (cause not specified)	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	...	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
XV.—Ill-Defined Diseases.																																								
Group Total	21	7	1	..	1	2	..	1	..	1	1	2	..	2	1	1	1	11	10	..	18	..	1	2	13	7	1	..	..	3	3	..	3	2	..	4	..	4	..	2
204. Sudden death	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
205A. Cause of death unstated or ill-defined	20	6	1	..	1	2	..	1	..	1	1	2	..	2	1	1	1	11	9	..	17	..	1	2	12	7	1	..	..	3	3	..	3	1	..	4	..	4	..	2

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	330	54	5	2	1		3	3	7	14	12	18	29	50	67	65		181	149		263	45	11	11	113	134	83			18	22	32	32	29	25	25	19	30	32	26
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	35	4	1	..	..	..	..	1	2	5	5	3	4	5	2	3	..	23	12	..	29	6	..	..	16	17	2	..	..	2	2	3	3	1	1	2	5	6	7	3	..
1A. Typhoid fever	7	..	..	..	..	..	..	..	1	1	..	..	1	3	..	1	..	5	2	..	6	1	..	..	2	5	..	..	..	..	..	..	..	..	..	1	3	1	2	..	..
7. Measles	3	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	3	..	3	..	..	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..
9. Whooping cough	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	4	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	..	3	1	..	3	1	..	..	1	3	..	..	..	..	1	1	1	1	..	..	..	..	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25. Puerperal infection, septicaemia	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	12	1	..	..	..	..	..	..	..	1	3	2	2	2	1	..	..	8	4	..	10	2	..	..	4	6	2	..	..	1	..	1	..	..	1	1	2	2	3	1	..
36B. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	15	1	..	..	..	..	..	1	2	3	2	3	2	1	..	..	..	9	6	..	13	2	..	..	6	7	2	..	..	2	..	1	..	..	1	1	2	3	3	2	..
38E. Syphilis, stage not indicated	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
II.—General Diseases.																																								
Group Total	48	..	..	..	..	..	..	1	2	..	5	7	15	13	5	..	..	26	22	..	40	6	..	2	8	31	9	..	..	2	5	8	4	2	5	6	..	2	4	6	4
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44. Malignant tumors, stomach and liver	11	..	..	..	..	..	..	..	..	..	..	..	3	5	3	..	..	8	3	..	9	2	..	..	1	7	3	..	..	..	..	3	..	1	1	1	..	1	3	..	1
45. Malignant tumors, peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	2	1	..	1	2	..	..	1	2	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	..	1	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..
47. Malignant tumors, breast	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	..	2	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..

NORFOLK—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	14	04
49. Malignant tumors of other or unspecified organs	13											1	2	5	4	1		9	4		10	2		1	2	9	2				3	1	2	1	1	1			2	2
Total deaths from cancer	32											3	3	9	12	5		20	12		24	6		2	4	21	7			1	4	5	3	2	3	3		2	3	3	3
51. Rheumatic fever	1												1						1		1				1															1
57. Diabetes	4								1			1	1		1			2	2		4				2	2				1		2						1	
58A. Pernicious anaemia	5												1	4				1	4		5				1	4						1						2	
58B. Other anaemias and chlorosis	1													1				1			1					1							1						
60A. Exophthalmic goitre	2												1	1					2		2					1	1			1					1				
60B. Other diseases of the thyroid gland	1														1				1		1						1							1					
63. Diseases of the adrenals	1											1						1			1					1								1					
69. Other general diseases	1									1								1			1					1								1					
III.—Diseases of the Nervous System.																																								
Group Total	38	1	1		1			1		1	1	3	4	7	9	9		17	21		31	5	2		12	12	14			2	3	4	5	6	2	3		4	3	1	5
71A. Meningitis	3				1					1			1					2	1		3				1	2					1			1				1		
72. Tabes dorsalis (locomotor ataxy)	2												2						2		2				1	1								1					1	
73. Other diseases of the spinal cord	4		1											2	1			1	3		4				2	1	1		1			1			1			1		
74A. Cerebral haemorrhage, apoplexy	14												1	2	7	4		7	7		11	3			2	5	7			1	1	2	2	4			1	1		2
74B. Cerebral thrombosis and embolism	1												1						1			1				1								1						
75A. Hemiplegia	2														1	1		1	1		1	1				1	1						1							
75B. Other forms of paralysis	2													1		1			2		2					1				1							1			
78. Epilepsy	2										1			1				1	1		1		1		1		1													
79. Convulsions (non-puerperal; 5 years and over)	3							1								2		2	1		3				2		1										1		2
80. Infantile convulsions (under 5 years of age)	1	1																1			1				1											1			
82B. Neuritis	1											1							1		1				1									1					
83. Cerebral softening	1															1		1			1						1												
84. Other diseases of the nervous system	2											1		1				1	1		1		1		1		1			1				1					
IV.—Diseases of the Circulatory System.																																							
Group Total	84						1	1		2		3	7	10	32	28		46	38		60	15	5	4	7	45	32			3	5	9	8	9	6	2	10	4	11	9	8
89. Angina pectoris	6									1				2	3			3	3		6					5	1					1	1	1					3	
90. Other diseases of the heart	29							1		1		2	5	4	12	4		16	13		20	3	3	3	4	16	9			1	2	3	3	3	1	2	4		5	2	3
91B. Arteriosclerosis	46											1	2	4	17	22		25	21		31	12	2	1	2	23	21			2	3	4	4	5	5		6	4	6	3	4
92. Atheroma and other diseases of the arteries	2															2		2			2					1	1				1									1
94. Diseases of the veins (varicos, haemorrhoid, phlebitis, etc.)	1						1												1		1				1													1	

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
X.—Diseases of the Bones and Organs of Locomotion.																																										
Group Total	1													1				1					1			1								1								
157. Diseases of the joints (tuberculosis and rheumatism excepted)	1													1				1					1			1								1								
XI.—Malformations.																																									
Group Total	7	7																5	2		7				7								1	1	3			1	1			
159A. Congenital malformations not otherwise specified (still-births excepted)	3	3																2	1		3				3								1	1				1			
159B. Hydrocephalus	1	1																1			1				1										1						
159C. Congenital malformations of the heart	3	3																2	1		3				3										2			1			
XII.—Diseases of Early Infancy.																																									
Group Total	21	21																9	12		21				21					3		3	2	2		2	1	3	1	3	1
160A. Nurslings discharged from hospital without disease	1	1																	1		1				1					1											
160B. Congenital debility, icterus and scleroma	6	6																1	5		6				6							1		1			1	2			1
161A. Premature birth	13	13																7	6		13				13					2		1	2	1		2		1	1	3	
162. Other diseases peculiar to early infancy	1	1																1			1				1							1									
XIII.—Old Age.																																									
164. **Group Total**	8														1	7		2	6		5	1		2	2	1	5						1		3	2		1			1
XIV.—External Causes.																																									
Group Total	16			1			2		1	1	3	2	2	3		1		10	6		14	1	1		8	5	3			1		1	1	3		2		2	4	2	
166. Suicide by corrosive substances	1											1						1					1		1												1			
179. Burns (conflagration excepted)	1						1												1		1				1												1			
183. Accidental injury by firearms (war casualties excepted)	1													1				1			1				1									1						
185. Accidental injury by fall	2													1		1		1	1		2					1	1							1				1		

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**623**	**90**	**5**	**12**	**3**	**5**	**11**	**6**	**8**	**28**	**23**	**27**	**63**	**90**	**146**	**106**		**314**	**309**		**502**	**101**	**10**	**10**	**228**	**255**	**139**		**1**	**51**	**58**	**62**	**63**	**57**	**44**	**44**	**51**	**44**	**56**	**49**	**44**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	69	10	1	5	1	1	5	1	4	9	6	5	7	5	8	1		36	33		61	8			39	25	5			6	10	5	11	9	5	2	3	6	7	3	2
1A. Typhoid fever	5									1	1		2		1			1	4		5				2	2	1										1	2	1	1	
3. Relapsing fever (spirillum obermeieri)	1				1													1			1				1															1
6. Smallpox	1														1			1				1			1		1													
7. Measles	1					1													1		1				1						1									
8. Scarlet fever	1							1										1			1				1							1								
9. Whooping cough	12	10	1	1														5	7		12				12					1	2		3	2	3		1			
10. Diphtheria	4			1		1	1				1							2	2		4				3	1					1			2			1			
11A. Influenza with pneumonic complications specified	8			2						2	1	1		1	1			5	3		7	1			4	3	1			1	3		2	1				1		
11B. Influenza without pneumonic complications specified	10			1			1		1	2		1	1	1	1	1		5	5		9	1			6	4				2	1	1	2	1		1		1	1	
15. Cholera nostras	2				1									1					2		2				1	1										1	1		
21. Erysipelas	1													1				1			1					1						1							
25. Purulent infection, septicaemia	2							1					1					1	1			2				2										1		1		
31. Tuberculosis of the respiratory system	19						1		1	4	3	2	3	3	2			12	7		16	3			7	11	1			2	2	3	2	2	2	1	1		2	1	1
37A. Disseminated tuberculosis—acute	1							1											1		1				1								1							
Total deaths from tuberculosis	20						1	1	1	4	3	2	3	3	2			12	8		17	3			8	11	1			2	2	3	2	3	2	1	1		2	1	1
38C. Syphilis, teritiary	1											1						1			1						1										1			
II.—General Diseases.																																								
Group Total	81									1	3	6	25	16	24	6		36	45		67	13	1		16	50	15			10	6	8	8	5	5	5	4	9	7	8	6
43. Malignant tumors of the buccal cavity	3											1	1		1			3			2	1				2	1			1			1			1				
44. Malignant tumors of the stomach and liver	11												2	3	4	2		7	4		6	5			1	6	4			1	1	2		1	1	1		2		2	
45. Malignant tumors of the peritoneum, intestines and rectum	6												1	1	4			1	5		5	1				4	2			1			1		1				1	1	1

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NORTHUMBERLAND AND DURHAM—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
94. Diseases of the veins (varicose, haemorrhoid, phlebitis, etc.)	2									..			2						2		2					2								1			1			
96. Haemorrhage without determined cause; other diseases of the circulatory system	1	1									..								1		1				1													1		
V.—Diseases of the Respiratory System.																																									
Group Total	62	10		2	1	1	3			2	3	2	4	8	13	13		32	30		49	10		3	24	30	8			4	13	12	10	6	1	1	1	5	2		7
98. Diseases of the larynx	2					1	1											1	1		2				1	1					1						1			
99A. Bronchitis, acute	1															1		1				1				1					1									
99B. Bronchitis, chronic	2											1		1				1	1		2					2							1			1				
99D. Bronchitis, not otherwise defined, over 5 years of age	13												1		7	5		4	9		7	6			2	7	4			1	4	2	1	1				2		2
100A. Broncho-pneumonia	15	7		1	1		2				2				1	1		6	9		13			2	11	4				1	2	4	4	1			2			1
100B. Capillary bronchitis	1	1																1			1				1								1							
101A. Pneumonia lobar	8									2	1	1		1	1	2		7	1		7	1			2	4	2				1	2	1	2						2
101B. Pneumonia, not otherwise defined	15	2		1									2	6	2	2		8	7		13	1		1	6	8	1			2	3	1	3	1	1	1		1		2
102. Pleurisy	1														1			1			1					1					1									
105. Asthma	3												1		1	1		1	2		3				1	2					2						1			
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	1															1		1				1					1				1									
VI.—Diseases of the Digestive System.																																									
Group Total	54	15	2	2		2		1	1	3	2	1	7	10	5	3		26	28		49	3	1	1	28	18	8			2	5	4	5	6	3	2	9	6	6	5	1
108A. Diseases of the teeth and gums	1	1																	1		1				1											1					
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	4								1	2					1				4		3	1			2	2							1	1			1		1		
111A. Ulcer of the stomach	1														1			1			1					1											1				
112. Other diseases of the stomach (cancer excepted)	7												4	2	1			3	4		6		1			7				1	1	1				1		3		
113. Diarrhoea and enteritis (under 2 years)	16	14	2															11	5		16				16					1	2	2	1			1	3		4	
114. Diarrhoea and enteritis (over 2 years)	5			1		1								1		2		2	3		5				2		3				1				1	1	2			
117. Appendicitis and typhlitis	5			1		1		1					1		1			4	1		4			1	3	2							1	1			1	1			1
118A. Hernia	1														1				1		1					1									1					
118B. Intestinal obstruction	3												1	1		1		1	2		2	1			1		2			1							1		1	
119B. Other diseases of the intestine	2													2				2			1	1			1		1						2							
122B. Cirrhosis, not returned as alcoholic	2													2				2			2					1	1				1			1						
123. Biliary calculi	2													2					2		2				1		1						1	1						
124. Other diseases of the liver	4										2	1	1						4		4				1	3				2					1	1				
126. Peritonitis of unstated origin	1									1									1		1										1									

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NORTHUMBERLAND AND DURHAM—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	38	38																14	24		38				38					1	6	3	1	1	5	4	5	2	5	4	1
160B. Congenital debility, icterus and scleroma	20	20																8	12		20				20						3	2	1	1	3	1	3	1	3	1	1
161A. Premature birth	13	13																4	9		13				13						1	1			1	3	1	1	2	3	
161B. Injury at birth	1	1																1			1				1					1											
162. Other diseases peculiar to early infancy	4	4																1	3		4				4						2				1		1				
164. XIII.—Old Age.																																									
Group Total	40													1	9	30		19	21		20	17	2	1	2	13	25			7	1	5	1	3	5		4	3	1	6	4
XIV.—External Causes.																																									
Group Total	37	4		1		1	1	2	3	7	1	2	2	8	4	1		26	11		32	5			21	12	4			2	1	1	6	1	2	8	5	1	1	3	6
165. Suicide by solid or liquid poisons	1											1							1		1				1						1									
170. Suicide by firearms	2									1				1				1	1						1		1						1				1			
178. Conflagration	2	1		1														2			2				2														2	
180. Accidental mechanical suffocation	1	1																1			1				1															1
182. Accidental drowning	10					1			2	5				2				8	2		9	1			6	4						1	4		1	3	1				
183. Accidental injury by firearms (war casualties excepted)	2							1	1									1	1		2				2												1			1
184. Accidental injury by cutting or piercing instruments	1										1							1			1					1				1										
185. Accidental injury by fall	3											1	1	1				2	1		2	1			1	2				1								1		1
Other forms of crushing (Vehicles, Railways Landslides, etc.)	1							1					1		1			3	1		3	1			2	2						1		1						1
188A. Railroad accidents	1												1					1				1				1								1						
188F. Other accidental injuries by crushing, etc	3							1							2			2	1		3				2	1						1					1			1
189. Injury by animals (poisoning excepted)	2													2				2			2				1	1									1					1
194. Excessive heat	5	2								1					2			1	4		4	1			3	1	1								5					
201C. Fracture (cause not specified)	1													1				1				1					1											1		
202. Other external violence	3						1							1		1		3			3				1	1	1						1			1				1
XV.—Ill-defined Diseases.																																									
Group Total	6	1								1				2	1	1		3	3		4	1	1		1	4	1							1	1			2	1	1
204. Sudden death	1													1				1			1					1														1
205A. Cause of death unstated or ill-defined	5	1								1				1	1	1		2	3		3	1	1		1	3	1							1	1			2	1	

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**418**	**55**	**8**	**5**	**3**	**2**	**3**	**5**	**10**	**10**	**24**	**18**	**34**	**66**	**94**	**81**		**231**	**187**		**315**	**85**	**9**	**9**	**146**	**173**	**99**			**38**	**43**	**40**	**40**	**29**	**31**	**27**	**37**	**33**	**35**	**32**	**33**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	37	5	1	2	1	1	..	1	3	4	3	3	2	7	1	3		21	16		30	3	2	2	21	12	4			3	4	4	5	2	1	1	6	2	2	3	4
1A. Typhoid fever	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
7. Measles	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
8. Scarlet fever	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
9. Whooping cough	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
10. Diphtheria	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
11A. Influenza with pneumonic complications specified	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	5	2	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	3	2	..	4	1	..	..	2	2	1	..	..	..	1	1	2	..	..	..	1	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	1	2	..	1	..	..	2	1	1	1	..	..	..	..	..	..	..	..	..	1	1	..	1	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	13	..	..	..	..	..	..	1	..	2	2	1	2	4	1	..	..	7	6	..	9	2	2	..	5	6	2	..	..	2	1	1	..	1	..	1	2	1	1	1	2
33. Tuberculosis of the intestines and peritoneum	2	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
37A. Disseminated tuberculosis—acute	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	17	1	..	..	..	..	..	1	2	3	2	1	2	4	1	..	..	8	9	..	13	2	2	..	9	6	2	..	..	2	3	3	..	1	..	1	2	1	1	1	2
II.—General Diseases.																																								
Group Total	56	..	..	..	..	..	..	2	2	..	2	3	8	19	16	4	..	31	25	..	44	10	1	1	11	34	11	..	..	6	7	12	1	2	6	2	2	1	4	7	6
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	14	..	..	..	..	..	..	..	..	..	..	..	2	6	5	1	..	8	6	..	10	3	1	..	1	9	4	..	..	1	2	2	1	..	2	1	..	..	1	3	1
45. Malignant tumors of the peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..

ONTARIO—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
46. Malignant tumors of the female genital organs	4											1	1	2					4		2	2				3	1			1	1	1				1				
47. Malignant tumors of the breast	1															1			1		1						1													1
49. Malignant tumors of other or unspecified organs	13											1	3	4	4	1		10	3		10	2		1	3	9	1			1	2	3			2	1	1		1	1	1
Total deaths from cancer	35											2	7	13	10	3		18	17		26	7	1	1	4	23	8			3	5	7	1	1	5	2	2		2	4	3
52. Chronic rheumatism, osteo-arthritis, gout	2													1	1			2			1	1			1		1												1	1
57. Diabetes	6							2	1					2	1			2	4		6				4	1	1			1							1	2	1	1
58A. Pernicious anaemia	11										1	1	1	3	4	1		7	4		9	2			1	9	1			1	2	4		1	1				1	1
58B. Other anaemias and chlorosis	1										1							1			1					1				1										
65B. Lymphadenoma (Hodgkin's disease)	1								1									1			1				1						1									
III.—Diseases of the Nervous System.																																								
Group Total	57	3		1			2		2		3	3	3	11	18	11		32	25		41	14	1	1	13	28	16			2	2	3	7	6	4	7	2	9	5	3	7
70. Encephalitis	1										1							1			1				1									1						
71A. Meningitis	3	1		1			1											2	1		3				3								1			1	1		
71B. Cerebrospinal meningitis	1								1										1		1				1									1					
73. Other diseases of the spinal cord	2													2					2		2					2			1								1		
74A. Cerebral haemorrhage, apoplexy	35										1	2	1	6	15	10		18	17		22	12		1	1	20	14			1	2	3	4	2	2	3	1	8	2	3	4
75B. Other forms of paralysis	1													1				1			1					1									1					
76. General paralysis of the insane	1										1							1					1			1									1					
77. Other forms of mental alienation	3													1	2			2	1		3				2	1							1	1					1
78. Epilepsy	4											1	1	1	1			3	1		3	1			1	2	1								1	1			2
79. Convulsions (non-puerperal; 5 years and over)	1								1										1		1				1								1						
80. Infantile convulsions (under 5 years of age)	2	2																1	1		2				2								1		1				
82B. Neuritis	2													1		1		2			1	1				1	1					1					1		
86A. Diseases of the ears	1						1											1			1				1								1						
IV.—Diseases of the Circulatory System.																																							
Group Total	84		2							1	2	2	8	14	28	27		47	37		59	22	1	2	16	37	31			4	11	7	11	5	9	7	8	5	7	7	3
88. Acute endocarditis and myocarditis	2										1	1						1	1		1	1			1	1											1			1	
89. Angina pectoris	1														1				1		1					1						1								
90. Other diseases of the heart	43		2								1	1	5	7	12	15		22	21		27	14	1	1	10	17	16			2	7	3	6	2	5	4	2	4	4	3	1
91B. Arteriosclerosis	38									1			3	6	16	12		24	14		30	7		1	5	18	15			2	4	3	5	3	4	3	5	1	3	3	2

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII.—The Puerperal State.																																									
Group Total	2	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	2	.	2	.	.	.	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.
143B. Ectopic gestation	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	1	.	1	1	.	.	.	.	2	.	.	1	1	.	.	.	.	.	.	.	.	.	.
151. Gangrene	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	1	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.
153. Phlegmon, acute abscess	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
XI.—Malformations.																																									
Group Total	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	2	.	.	.	2	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
159A. Congenital malformations not otherwise specified (still-births excepted)	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
159C. Congenital malformations of the heart	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
XII.—Diseases of Early Infancy																																									
Group Total	28	28	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	21	7	.	28	.	.	.	28	.	.	.	.	3	1	1	3	2	1	2	5	4	3	2	1
160B Congenital debility, icterus and sceroma	12	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9	3	.	12	.	.	.	.	12	.	.	.	3	.	.	1	.	1	1	1	2	3	.	.
161A. Premature birth	14	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	3	.	14	.	.	.	14	.	.	.	.	.	.	2	2	.	1	4	2	.	2	1
161B. Injury at birth	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	2	.	.	.	2	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.
XIII.—Old Age.																																									
164. Senility total	23	.	.	.	.	.	.	.	.	.	.	.	.	1	8	14	.	16	7	.	15	7	1	.	3	10	10	.	.	1	3	1	3	4	1	.	1	3	3	2	1
XIV.—**Group Total**																																									
Group Total	24	1	1	.	1	.	.	.	1	4	3	5	2	2	.	4	.	18	6	.	15	7	2	.	11	12	1	.	.	2	.	1	.	2	1	5	6	.	2	2	3
168. Suicide by hanging or strangulation	3	.	.	.	.	.	.	.	.	.	1	2	.	.	.	.	.	2	1	.	2	1	.	.	1	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	2
170. Suicide by firearms	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
174. Other suicides	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
179. Burns (conflagration excepted)	3	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	2	.	3	.	.	.	3	.	.	.	.	1	.	1	.	.	.	.	.	.	.	1	.
182. Accidental drowning	4	.	.	.	.	.	.	1	.	1	1	.	1	.	.	.	.	3	1	.	3	1	.	.	2	2	.	.	.	.	.	.	.	1	.	1	1	.	1	.	.
185. Accidental injury by fall	2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	2	.	.	1	1	.	.	.	2	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	288	36	3	3	2	1		4	6	18	18	14	24	43	67	49		153	135		220	55	11	2	96	120	72			27	26	23	24	26	21	24	24	15	18	35	25
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	29	4		1	1			1	3	4	4	1	4	1	4	1		15	14		25	4			13	13	3			4	3	1	4	1	1	3	4	2	2	4
8. Scarlet fever	1				1													1			1				1					1										
10. Diphtheria	2			1						1								1	1		2				1	1				1						1				
11A. Influenza with pneumonic complications specified	1													1					1		1					1						1								
11B. Influenza without pneumonic complications specified	1	1																1			1				1												1			
16C. Dysentery due to other causes or of unspecified origin	2														1	1		1	1		1	1				2														
21. Erysipelas	1	1																	1		1				1											2					1
25. Purulent infection, septicaemia	4	1									2		1					2	2		3	1			1	3					2				1					1
31. Tuberculosis of the respiratory system	9								2	3		1	2		1			6	3		8	1			4	5				1	1	1		1			2		2	1
33. Tuberculosis of the intestines and peritoneum	4										1		1		2			1	3		4					2	2			1			2				1			
36D. Tuberculosis of the genito-urinary system	1							1										1			1				1								1							
Total deaths from tuberculosis	14							1	2	3	1	1	3		3			8	6		13	1			5	7	2			2	1	1	3	1			3		2	1
38D. Syphilis, hereditary	2	1							1										2		1	1			2												1			1
38E. Syphilis, stage not indicated	1										1							1			1				1													1		
II.—General Diseases.																																								
Group Total	46					1		1			3	3	6	14	11	7		20	26		38	7	1		6	27	13			2	3	4	3	4	5	7	5	2	2	9	
44. Malignant tumors of the stomach and liver	13												1	5	5	2		6	7		12	1				7	6				1		1	1	3		1	2		4	
45. Malignant tumors of the peritoneum, intestines and rectum	2												1			1		1	1		2					1	1					1							1	
46. Malignant tumors of the female genital organs	4											3				1			4		3	1				3	1				2				1	1				
47. Malignant tumors of the breast	2												1	1					2		2				1	1				1										

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OXFORD—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
100A. Broncho-pneumonia	8	3	1											1	2	1		4	4		5	3			6	2				1	1	1				1			3	1
101A. Pneumonia, lobar	3									1					2			1	2		2	1			2	1							2				1			
101B. Pneumonia not otherwise defined	15	2	1							1	1			3	4	3		10	5		11	3	1		6	6	3			3	3	2	1	3						3
103. Congestion and haemorrhagic infarct of the lung	1														1			1			1					1							1							
105. Asthma	2												1		1			1	1			1	1			2										1	1			
VI.—Diseases of the Digestive System.																																								
Group Total	9	2									1			1	3	2		4	5		8	1			3	3	3			1	2	1		1		1	1		1		1
113. Diarrhoea and enteritis (under 2 years)	1	1																1			1				1						1									
114. Diarrhoea and enteritis (over 2 years)	1														1				1		1						1			1									
117. Appendicitis and typhlitis	2										1					1		2			2					1	1			1	1								
118B. Intestinal obstruction	2	1														1		1	1		2				1		1						1		1				
122B. Cirrhosis not returned as alcoholic	1														1				1			1				1											1		
123. Biliary calculi	1													1					1		1					1										1			
124. Other diseases of the liver	1														1				1		1				1														1
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																								
Group Total	9									1		2	1	1	3	1		4	5		7	2			2	6	1			3	1		2	2					1	
129. Chronic nephritis (Bright's disease)	6											2	1	1	1	1		2	4		5	1			2	3	1			2	1		1	2						
135. Diseases of the prostate	2														2			2			1	1				2							1					1		
138. Salpingitis and pelvic abscess	1									1									1		1					1				1									
VIII.—The Puerperal State.																																								
Group Total	7								1	3	3								7		6		1			7									2	1		2	2		
143A. Abortion	1										1								1				1			1											1			
144. Puerperal haemorrhage	1										1								1		1					1										1				
145B. Other surgical operations and instrumental delivery	1										1								1		1					1											1			
145C. Other accidents of labor	1								1										1		1					1								1						
148. Puerperal albuminuria and convulsions	3									3									3		3					3								1			1	1		
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2	1														1		2			1	1			1		1				1				1					
153. Phlegmon, acute abscess	1	1																1			1				1										1					
155. Other diseases of the skin and its annexa	1															1		1				1					1			1									

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**267**	**62**	**12**	**2**	**2**	**1**	**12**	**4**	**12**	**14**	**13**	**10**	**18**	**37**	**39**	**29**		**159**	**108**		**200**	**42**	**17**	**8**	**134**	**83**	**50**			**19**	**21**	**17**	**22**	**19**	**16**	**27**	**24**	**23**	**25**	**29**	**25**
I.—Endemic, Epidemic and Infectious																																								
Group Total	35	5	1	1	..	6	1	3	5	2	3	5	2	..	1	..	23	12	..	29	3	2	1	21	11	3	..	..	3	9	..	4	1	1	1	2	3	7	2	2
1A. Typhoid fever	6	..	..	..	..	..	1	..	1	1	..	1	2	..	..	..	..	5	1	..	5	..	1	..	1	4	1	..	..	..	..	..	1	1	2	..	1	..	..	..	..
7. Measles	3	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2	..	3	..	..	..	2	1	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..
9. Whooping Cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..
10. Diphtheria	4	1	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4	..	..	..	4	..	..	..	..	..	1	..	..	..	..	..	..	3	..	..	..
11A. Influenza with pneumonic complications specified	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
16C. Dysentery due to other causes or of unspecified origin	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	1	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..
25. Purulent infection, septicaemia	2	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	10	..	..	..	..	..	1	..	3	1	2	2	1	..	..	..	..	5	5	..	7	1	1	1	5	4	1	..	..	..	4	..	1	..	1	1	1	1	1	..
37A. Disseminated tuberculosis—acute	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
Total deaths from tuberculosis	12	..	..	..	..	..	1	1	3	1	2	3	1	..	..	..	..	7	5	..	9	1	1	1	6	5	1	..	..	1	4	..	1	..	1	1	1	1	1	..
II.—General Diseases.																																								
Group Total	25	1	..	..	..	1	..	1	..	1	..	3	3	8	5	2	..	10	15	..	10	11	3	1	3	17	5	..	..	2	1	1	2	2	1	4	1	2	5	2	2
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
44. Malignant tumors of the stomach and liver	10	..	..	..	..	..	..	..	..	..	1	2	3	2	2	..	..	3	7	..	3	6	..	1	..	7	3	..	..	..	..	..	1	..	1	2	..	2	4	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
46. Malignant tumors of the female genital organs	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	2	..	1	..	1	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..
48. Malignant tumors of the skin	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	23	9	2		1		1		2		1	1		2	2	2		13	10		21	1	1		16	6	1			1	1	2	2		1	3	4	1	4	2	2
108A. Diseases of the teeth and gums	1	1																1			1				1													1		
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2				1						1							2			2				2											1			1	
112. Other diseases of the stomach (cancer excepted)	1															1			1		1					1									1					
113. Diarrhoea and enteritis (under 2 years)	10	8	2															6	4		10				10					1		2	2		2	1			2	
114. Diarrhoea and enteritis (over 2 years)	1														1			1				1			1													1	
117. Appendicitis and typhlitis	3							2			1							1	2		3				2	1									1		1		
118A. Hernia	1													1				1			1					1											1		
118B. Intestinal obstruction	2													1		1		1	1		2					1	1									1		
119B. Other diseases of the intestine	1						1												1		1				1					1									
123. Biliary calculi	1														1				1				1			1										1			
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																							
Group Total	9						1							3	4	1		7	2		6	2	1		3	4	2			1	2				2	1	2	1	
128. Acute nephritis	1						1											1			1				1													1	
129. Chronic nephritis (Bright's disease)	7													3	4			5	2		4	2	1		2	3	2			1	2				2	1	1		
135. Diseases of the prostate	1															1		1			1					1											1		
VIII.—The Puerperal State.																																							
Group Total	4									2	2							4			4					4									2		1		1	
144. Puerperal haemorrhage	1										1							1			1					1												1	
145c. Other accidents of labor	1										1							1			1					1									1				
146. Puerperal sepsis	1									1								1			1					1									1				
149. Childbirth (without other explanation)	1									1								1			1					1										1			
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	1															1			1			1				1								1						
151. Gangrene	1															1			1			1				1								1						

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**231**	**43**	**2**	**1**	**2**	**3**	**3**	**3**	**1**	**8**	**12**	**01**	**19**	**41**	**46**	**37**		**114**	**117**		**187**	**37**	**4**	**3**	**82**	**98**	**50**		**1**	**23**	**27**	**17**	**16**	**24**	**12**	**21**	**12**	**15**	**17**	**27**	**20**
I.—Endemic, Epidemic and Infectious Diseases.																																									
Group Total	24	7	..	1	1	..	1	..	1	..	3	2	4	4	..	..	..	8	16	..	24	..	..	..	11	12	1	..	..	3	5	3	3	..	..	1	3	1	2	..	3
7. Measles	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
10. Diphtheria	5	..	..	1	1	..	1	..	..	..	..	1	1	..	..	..	..	1	4	..	5	..	..	..	3	2	..	..	..	..	2	1	..	..	..	1	..	..	..	..	1
11A. Influenza, with pneumonic complications specified	6	2	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	1	5	..	6	..	..	..	2	3	1	..	..	..	2	2	2	..	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
21. Erysipelas	3	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	3	..	..	..	2	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	3	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	2	1	..	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1
37B. Disseminated tuberculosis, chronic	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Total deaths from tuberculosis	4	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	3	1	..	4	..	..	..	..	4	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2
II.—General Diseases.																																									
Group Total	38	..	..	..	..	..	..	..	..	1	1	3	5	15	10	3	..	18	20	..	27	11	..	..	2	28	8	..	..	2	2	3	3	6	3	4	1	3	4	3	4
44. Malignant tumors, stomach and liver	10	..	..	..	..	..	..	..	..	1	..	..	1	4	4	..	..	4	6	..	7	3	..	..	..	8	2	..	..	1	..	..	1	2	1	..	1	..	2	2	..
43. Malignant tumors, peritoneum, intestines and rectum	6	..	..	..	..	..	..	..	..	..	..	2	1	1	1	1	..	2	4	..	5	1	..	..	..	4	2	..	..	..	1	2	..	1	..	1	..	1	..	..	..
46. Malignant tumors, female genital organs	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
49. Malignant tumors of other or unspecified organs	5	..	..	..	..	..	..	..	..	..	..	..	1	3	..	1	..	1	4	..	3	2	..	..	1	2	2	..	..	..	..	1	..	1	..	1	..	..	1	..	1
Total deaths from cancer	23	..	..	..	..	..	..	..	..	1	..	2	4	9	5	2	..	7	16	..	17	6	..	..	1	16	6	..	..	1	1	3	1	5	1	2	1	1	3	3	1
51. Rheumatic fever	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
52. Chronic rheumatism, osteo-arthritis, gout	4	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	..	2	2	..	1	3	..	..	..	3	1	..	..	1	..	..	..	..	..	2	..	..	1	..	..	..

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PEEL—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
111A. Ulcer of the stomach	1													1				1			1					1													1	
111B. Ulcer of the duodenum	1														1			1			1					1									1					
112. Other diseases of the stomach (cancer excepted)	3	1											1		1			2	1		2	1			1	1	1				1		1					1	
113. Diarrhoea and enteritis (under 2 years)	4	3	1															3	1		4				4										3	1			
114. Diarrhoea and enteritis(over2years)	1						1												1		1				1								1						
117. Appendicitis and typhlitis	1														1				1		1					1											1		
118A. Hernia	1					1												1			1				1									1					
119B. Other diseases of the intestine	1														1			1			1					1				1									
124. Other diseases of the liver	2													1	1			1	1		2					1	1			1									1
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																							
Group Total	7								1					1	2	3		4	3		3	2	1	1	3	2	2			1	2		2	1						1
128. Acute nephritis	1							1											1		1				1								1						
129. Chronic nephritis (Bright's disease)	1															1		1						1	1														1
131. Other diseases of the kidneys and their annexa (diseases of the kidkidneys in pregnancy excluded)	2														1	1			2		1	1					2			1			1						
135. Diseases of the prostate	3													1	1	1		3			1	1	1		1	2				2			1						
VIII.—The Puerperal State.																																							
Group Total	6									2	2	2							6		6					6					1		2		1	1		1	
143C. Other accidents of pregnancy	1											1							1		1					1												1	
145B. Other surgical operations and instrumental delivery	1										1								1		1					1							1						
145C. Other accidents of labor	1									1									1		1					1									1				
148. Puerperal albuminuria and convulsions	3									1	1	1							3		3					3					1		1			1			
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	1													1					1		1						1				1								
151. Gangrene	1													1					1		1						1				1								
X.—Diseases of the Bones and Organs of Locomotion.																																							
Group Total	1														1				1		1					1					1								
156. Diseases of the bones (tuberculosis and rickets excepted)	1														1				1		1					1					1								

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CAUSES OF DEATH IN THE COUNTY OF PERTH, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	369	51	5	4	1	3	3	3	5	14	13	26	36	60	70	75		191	178		272	70	26	1	117	154	98			25	35	38	26	28	14	37	23	33	29	42	39
I.—Endemic, Epidemic and Infectious Diseases.																																									
Group Total	30	2	1	2	..	1	1	2	3	6	3	..	3	2	2	2	..	15	15	..	25	5	..	..	18	8	4	..	..	3	3	6	1	2	1	3	1	2	1	5	2
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
10. Diphtheria	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	3	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	1	2	..	1	2	..	..	1	1	1	..	..	1	..	2	..	..	..	..	..	..	..	..
15. Cholera nostras	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	4	..	1	2	..	..	..	1	..	..	..	..	..	..	..	..	..	3	1	..	4	..	..	..	4	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
29. Tetanus	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
31. Tuberculosis of the respiratory system	14	..	..	..	..	..	..	1	2	6	1	..	2	2	..	..	..	5	9	..	13	1	..	..	8	5	1	..	..	1	2	4	1	1	1	1	..	..	1	1	1
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	15	..	..	..	..	..	..	1	2	6	2	..	2	2	..	..	..	5	10	..	14	1	..	..	8	6	1	..	..	1	3	4	1	1	1	1	..	..	1	1	1
II.—General Diseases.																																								
Group Total	60	..	..	..	..	..	..	..	1	2	3	7	7	10	17	4	..	26	34	..	47	7	5	1	11	34	15	..	..	3	3	7	4	8	3	7	3	8	5	7	2
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
44. Malignant tumors, stomach and liver	19	..	..	..	..	..	..	..	..	..	..	2	1	7	9	..	..	8	11	..	15	1	3	..	2	11	6	..	..	2	1	1	1	2	..	2	1	3	3	2	1
45. Malignant tumors, peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	2	1	..	3	..	..	..	1	1	1	..	..	..	..	..	..	1	..	..	1	1	..	..	..
46. Malignant tumors, female genital organs	3	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	3	..	3	..	..	..	..	2	1	..	..	..	..	..	2	..	..	..	1	..	..	..	..
47. Malignant tumors, breast	5	..	..	..	..	..	..	..	..	..	..	1	3	..	..	1	..	..	5	..	4	1	..	..	2	2	1	..	..	..	1	1	2	1	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	7	..	..	..	..	..	..	..	..	..	..	1	1	1	2	2	..	5	2	..	4	2	..	1	1	3	3	..	..	..	..	..	..	1	1	1	..	1	1	2	..
Total deaths from cancer	38	..	..	..	..	..	..	..	..	..	..	5	6	12	12	3	..	16	22	..	30	4	3	1	6	20	12	..	..	2	2	2	3	7	1	3	2	6	5	4	1
51. Rheumatic fever	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..

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PERTH—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
115. Diarrhoea and enteritis (under 2 years)	10	8	2															7	3		10				10									1			2	4	1		1
114. Diarrhoea and enteritis (over 2 years)	4			1	1		1								1			2	2		4				3		1				1				1			1	
117. Appendicitis and typhlitis	4					1			1					2				3	1		4				2		2				1							2	1
118B. Intestinal obstruction	1												1					1			1						1			1									
119B. Other diseases of the intestine	1									1								1					1		1										1				
122B. Cirrhosis, not returned as alcoholic	2												1			1		1	1		1	1				1	1									1	1		
123. Biliary calculi	1														1			1			1					1													1
124. Other diseases of the liver	5													1	1	3		1	4		3	1	1			3	2			1	1						1	1	1
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																							
Group Total	26									1		5	3	8	3	6		17	9		19	5	2		7	15	4			3	2	2	3	1	2	4		1	2	2	4
128. Acute nephritis	3											2	1					2	1		3				1	2				1	1							1	
129. Chronic nephritis (Bright's disease)	13									1		2	1	3	2	4		7	6		9	2	2		3	7	3			1	1	1	1	1	2			2		3
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1													1					1		1					1									1					
132. Calculi of the urinary passages	1											1						1			1				1							1							
135. Diseases of the prostate	7													4	1	2		7			4	3			2	4	1			1		1	1		1			1	1
137. Cysts and other benign tumors of the ovary	1												1						1		1					1								1					
VIII.—The Puerperal State.																																							
Group Total	2									1	1								2		2					2				1								1	
145C. Other accidents of labor	1										1								1		1					1				1									
146. Puerperal sepsis	1									1									1		1					1												1	
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	2														1	1		1	1		1		1		1		1							2						
151. Gangrene	1															1		1					1				1							1						
155. Other diseases of the skin and its annexa	1														1				1		1				1									1						
XI.—Malformations.																																							
Group Total	4	4																2	2		4				4							1	1				1		1	
159A. Congenital malformations not otherwise specified (still-births excepted)	2	2																1	1		2				2								1				1		
159C. Congenital malformations of the heart	2	2																1	1		2				2							1						1	

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CAUSES OF DEATH IN THE COUNTY OF PETERBOROUGH, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**226**	**35**		**1**	**3**	**4**	**6**	**2**	**4**	**10**	**12**	**8**	**17**	**37**	**39**	**48**		**114**	**112**		**192**	**26**	**6**	**2**	**82**	**75**	**69**			**12**	**35**	**18**	**18**	**17**	**16**	**21**	**16**	**21**	**19**	**18**	**15**
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	33	2	..	..	3	2	5	1	..	5	2	1	3	4	2	3	..	17	16	..	29	1	2	1	21	7	5	..	..	2	6	..	3	1	..	3	4	7	1	4	2
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
8. Scarlet fever	3	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	1	2	..	3	..	..	..	3	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
11A. Influenza with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..
11B. Influenza without pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
15. Cholera nostras	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
16C. Dysentery due to other causes or of unspecified origin	5	..	..	..	..	..	2	..	..	..	..	..	..	1	..	2	..	5	..	..	4	1	..	..	3	..	2	..	..	..	..	..	..	..	..	..	1	3	1	..	..
21. Erysipelas	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	1	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	11	..	..	..	..	..	..	..	..	5	1	1	2	2	..	..	..	5	6	..	10	..	1	..	6	4	1	..	..	2	3	..	..	1	..	1	1	1	..	1	1
32. Tuberculosis of the meninges and central nervous system generally	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	13	..	..	..	..	1	1	..	..	5	1	1	2	2	..	..	..	6	7	..	12	..	1	..	8	4	1	..	..	2	4	..	1	1	..	1	1	1	..	1	1
42. Other endemic, epidemic or infectious diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
II. —General Diseases.																																							
Group Total	35	1	..	..	1	..	..	1	..	1	6	4	9	9	3	..	14	21	..	32	2	1	..	7	20	8	..	..	2	8	6	2	2	..	3	3	2	5	1	1
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	2	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	6	..	..	..	..	..	..	..	..	..	..	1	..	2	3	..	..	2	4	..	5	..	1	..	1	3	2	..	..	1	1	1	..	..	..	1	..	..	1	1	..

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PETERBOROUGH—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
103. Congestion and haemorrhagic infarct of the lung	1	1																1			1				1														1	
105. Asthma	2										1			1					2		2					1	1					2								
VI.—Diseases of the Digestive System.																																									
Group Total	14	4		1		1	1			1	1		1	1	3			6	8		12	1	1		8	3	3				2		2	1	1	1	4		2	1
108A. Diseases of the teeth and gums	1	1																	1		1				1													1	
111A. Ulcer of the stomach	1													1					1		1					1							1						
112. Other diseases of the stomach (cancer excepted)	3												1		2			2	1		1	1	1			2	1			1		1			1				
113. Diarrhoea and enteritis (under 2 years)	3	3																2	1		3				3												2		1
114. Diarrhoea and enteritis (over 2 years)	2			1							1							1	1		2				1	1				1						1		
116E. Other parasites of the intestines	1					1													1		1				1							1						
118B. Intestinal obstruction	1						1											1			1				1											1		
124. Other diseases of the liver	1														1				1		1					1											1	
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1									1									1		1				1									1					
VII. Non-venereal Diseases of the Genito-urinary System and its Annexa.																																								
Group Total	7	1									1		1	2	2			6	1		7				2	5					1	1		2	1		1		1
128. Acute nephritis	2	1													1			2			2				1	1					1					1			
129. Chronic nephritis (Bright's disease)	4										1		1	1	1			3	1		4				1	3						1		1	1				1
133. Diseases of the bladder	1													1				1			1					1								1					
VIII.—The Puerperal State.																																								
Group Total	3									1	2								3		3					3					1	1		1					
144. Puerperal haemorrhage	2									1	1								2		2					2						1		1					
149. Childbirth (without other explanation)	1										1								1		1					1					1								
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	1												1					1			1						1									1			
153. Phlegmon, acute abscess	1												1					1			1						1									1			

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**430**	**151**	**16**	**8**	**5**	**9**	**14**	**8**	**10**	**25**	**14**	**14**	**19**	**33**	**50**	**51**	**3**	**220**	**210**		**400**	**7**	**8**	**15**	**250**	**125**	**55**			**38**	**29**	**34**	**52**	**32**	**30**	**33**	**39**	**39**	**33**	**33**	**38**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	82	17	3	2	4	7	9	3	5	12	5	3	3	4	1	3	1	38	44	..	72	2	2	6	57	23	2	..	..	8	6	8	7	7	7	3	6	8	6	9
1A. Typhoid fever	5	..	..	..	1	..	..	..	..	2	2	..	..	..	..	..	..	2	3	..	5	..	..	..	1	3	1	..	..	1	..	..	1	..	1	..	..	2	..	..
6. Smallpox	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
7. Measles	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
8. Scarlet fever	2	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..
9. Whooping cough	6	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6	..	..	..	6	..	..	..	..	..	1	1	3	..	1	..	..	..	..	..
10. Diphtheria	14	..	..	..	1	5	6	2	..	..	..	..	..	..	..	..	..	4	10	..	12	..	..	2	14	..	..	..	..	3	..	..	..	..	..	2	1	1	4	3
11A. Influenza with pneumonic complications specified	5	1	1	1	..	..	..	..	..	1	..	..	..	..	..	1	..	1	4	..	4	..	..	1	4	1	..	..	..	..	1	2	..	1	..	..	..	..	1	..
11B. Influenza without pneumonic complications specified	10	2	1	..	..	1	..	..	..	..	..	1	..	2	1	2	..	5	5	..	8	1	..	1	4	5	1	..	..	..	1	2	1	1	..	..	2	1	1	1
15. Cholera nostras	4	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4	..	..	..	4	..	..	..	..	..	1	..	..	..	..	1	..	1	1	..	..
16C. Dysentery due to other causes or of unspecified origin	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	26	1	..	..	2	..	..	..	4	8	3	2	3	2	..	..	1	10	16	..	22	1	2	1	13	13	..	..	..	3	..	2	2	5	5	1	2	1	1	..	4
32. Tuberculosis of the meninges and central nervous system generally	4	1	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	1	1	..	..	..	..	..	1	..	1	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Total deaths from tuberculosis	33	3	..	..	2	1	2	1	4	9	3	2	3	2	..	..	..	14	19	..	29	1	2	1	19	14	..	..	..	4	1	2	2	5	5	2	4	2	2	..	4
II.—General Diseases.																																								
Group Total	25	1	1	..	..	..	1	..	..	..	1	2	5	4	9	1	..	12	13	..	22	1	1	1	4	16	5	..	..	3	1	2	3	..	3	4	2	1	3	2	1
44. Malignant tumors of the stomach and liver	7	..	..	..	..	..	..	..	..	..	..	..	1	..	6	..	..	5	2	..	6	..	..	1	..	6	1	..	..	2	..	1	2	..	1	..	1	..	..	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..

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PRESCOTT AND RUSSELL—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
101B. Pneumonia not otherwise defined	21	3	3	1			1			2		1	2	3	2	3	..	12	9		19	2			12	5	4			3	1	3	3	2	2		1	1	..	2	3
102. Pleurisy	1															1	..	1				1					1			1											
103. Congestion and haemorrhagic infarct of the lung	8	1												1	1	5	..	3	5		7			1	1	3	4					1	3	1	1		1	1			
108. Asthma	1														1		..		1		1				1								1								
VI.—Diseases of the Digestive System.																																									
Group Total	82	29	3	1			1		1	2	1	1	8	5		27	25	..	50			2	38	11	3			4	3		5	1	2	8	8	11	5	3	2
111A. Ulcer of the stomach	1						1												1		1				1						1									
112. Other diseases of the stomach (cancer excepted)	5	1										1		1	1	1		3	2		4			1	3	2				1				1			1	1	1
113. Diarrhoea and enteritis (under 2 years)	31	28	3															18	13		31				31					3	2		2	1		5	7	8	3		
114. Diarrhoea and enteritis (over 2 years)	4			1											1	2		2	2		3			1	1	2	1							1		2			
118A. Hernia	1														1				1		1					1														
118B. Intestinal obstruction	1														1			1			1					1													1	
119B. Other diseases of the intestine	1									1								1			1				1										1					
122B. Cirrhosis not returned as alcoholic	2											2			2			2			2				1		1								1				1
123. Biliary calculi	2										1		1						2		2					2							1			1			
124. Other diseases of the liver	4												1		1	2			4		4					3	1						2		1			1		
VII.—Non-venereal Diseases of the Genito-urinary System and its Annexa.																																								
Group Total	19	2						1		1	1	1	1	2	6	4		9	10		18			1	4	9	6			3		1	3	1		3	1	2	1	2	2
128. Acute nephritis	2	2																1	1		2				2								1						1	
129. Chronic nephritis (Bright's disease)	15									1	1				5	3		7	8		14			1	2	7	6			2		1	2	1		3	1	2	1		2
135. Diseases of the prostate	1													1				1			1					1				1										
141. Other diseases of the female genital organs	1								1										1		1				1														1	
VIII. The Puerperal State.																																								
Group Total	6									1	4	1							6		5			1		6				1		2							3
144. Puerperal haemorrhage	1										1								1		1					1							1							
145C. Other accidents of labor	2										2								2		2					2														2
146. Puerperal sepsis	1											1							1				1		1								1							
147. Phlegmasia alba dolens; puerperal embolism or sudden death in the puerperium	1										1								1		1					1				1										
148. Puerperal albuminuria and convulsions	1																		1		1					1													1	

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CAUSES OF DEATH IN THE COUNTY OF PRINCE EDWARD, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**230**	**29**	**1**		**1**	**2**	**2**	**5**	**2**	**9**	**14**	**8**	**16**	**36**	**70**	**34**	**1**	**130**	**100**		**213**	**14**	**3**		**69**	**113**	**48**			**17**	**29**	**27**	**21**	**18**	**13**	**10**	**18**	**22**	**18**	**16**	**21**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	23	4	..	..	..	..	1	2	..	2	9	..	..	3	2	..	..	13	10	..	21	2	..	..	9	12	2	..	..	2	7	4	1	..	1	1	..	3	2	2
1. A—Typhoid fever	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..
9. Whooping cough	4	3	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	1	2	..	..	..	..	..	..	1	..	..
10. Diphtheria	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
11A. Influenza with pneumonic complications specified	5	..	..	..	..	..	..	..	..	..	4	..	1	..	..	..	..	5	..	..	5	..	..	..	1	4	..	..	..	..	2	2	1	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	3	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	1	..	3	..	..	..	1	2	..	..	..	..	1	2	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	1	..	2	3	..	..	..	2	..	..	3	5	..	7	1	..	..	2	4	2	..	..	1	1	..	..	..	1	..	..	..	2	1	2
Total deaths from tuberculosis	8	..	..	..	..	..	..	1	..	2	3	..	..	..	2	..	..	3	5	..	7	1	..	..	2	4	2	..	..	1	1	..	..	..	1	..	..	..	2	1	2
II.—General Diseases.																																								
Group Total	33	..	..	..	..	..	1	1	..	..	1	2	5	7	11	5	..	15	18	..	32	1	..	..	9	17	7	..	..	1	2	6	1	3	3	2	4	5	3	1	2
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	8	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	2	6	..	8	..	..	..	1	5	2	..	..	..	1	1	..	..	..	..	..	3	1	1	1
45. Malignant tumors of the peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	2	1	..	3	..	..	..	..	3	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..
46. Malignant tumors of the female genital organs	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	1	1	..	..	1	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..
47. Malignant tumors of the breast	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
48. Malignant tumors of the skin	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	2	1	..	3	..	..	..	1	..	2	..	..	..	1	..	..	..	..	..	1	..	1	..	..
49. Malignant tumors of other or unspecified organs	4	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	3	1	..	4	..	..	..	1	3	..	..	..	..	..	1	..	..	..	1	2	..	..	..	..
Total deaths from cancer	23	..	..	..	..	..	..	..	..	..	..	1	..	3	4	11	4	..	10	13	..	22	1	..	..	4	14	5	..	..	1	2	4	..	3	2	1	3	3	2	1	1
51. Rheumatic fever	3	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	3	..	..	3	..	..	..	2	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1
57. Diabetes	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	1	..	2	..	..	..	..	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..
58A. Pernicious anaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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PRINCE EDWARD– Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
114. Diarrhoea and enteritis (over 2 years)	4				1							1			2			2	2		4				2	1	1								1		2	1	
117. Appendicitis and typhlitis	2								1	1								2			2				1	1													
118B Intestinal obstruction	1	1																1			1				1														1
119B. Other diseases of the intestines	1												1					1			1					1												1	
123. Biliary calculi	1										1								1		1					1										1			
124. Other diseases of the liver	3	1												1	1			3			2	1			1	2							1				2	
126. Peritonitis of unstated origin	3									2					1			1	2		3					3			1					1	1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																							
Group Total	12										1			3	6	2		7	5		11	1				7	5			1	1	1	2		1		1	1	1	2
128. Acute nephritis	1													1					1		1						1						1						
129. Chronic nephritis—Bright's disease	7										1			1	4	1		4	3		7					5	2			1	1		1		1		1		2
133. Diseases of the bladder	1															1			1		1						1										1		
135. Diseases of the prostate	3													1	2			3			2	1				2	1					1					1		
XII.—Diseases of Early Infancy.																																							
Group Total	12	12																7	5		12				12						2	1	2		2	1		1	2	1
160B. Congenital debility, icterus and scleroma	4	4																2	2		4				4							1			1		1		1
161A. Premature birth	8	8																5	3		8				8					2		2		1	1			2	
164. XIII.—Old Age.																																							
Group Total	5														3	2		2	3		4		1		1	2	2			2					1	1	1		
XIV.—External Causes.																																							
Group Total	6					1		1		1		1			1	1		4	2		6				2	3	1			1	1	1	1		1	1			
174. Other suicides	1											1						1			1					1									1				
182. Accidental drowning	3					1		1		1								2	1		3				2	1				1			1		1				
185. Accidental injury by fall	1															1			1		1						1				1								
Other forms of crushing (vehicles, railways, landslides, etc.)	1														1			1			1					1						1							
188F. Other accidental injuries by crushing, etc.	1														1			1			1					1						1							
XV. Ill-Defined Diseases.																																							
Group Total	2															1	1	1	1		2				1		1			1									1
205A. Cause of death unstated or ill-defined	2															1	1	1	1		2				1		1			1									1

CAUSES OF DEATH IN THE DISTRICT OF RAINY RIVER, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Month.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	123	26	4	4	2	2	8	3	2	13	14	10	6	13	11	3	2	76	47		81	14	19	9	68	43	9		3	15	12	13	8	8	8	6	7	14	13	9	10
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	19	..	1	2	1	2	2	3	1	4	3	..	..	..	..	..	..	8	11	..	12	3	4	..	13	6	..	..	..	1	1	3	2	..	1	..	2	3	2	3	1
1A. Typhoid fever	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
7. Measles	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
8. Scarlet fever	3	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	1	2	..	3	..	..	..	3	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..
10. Diphtheria	4	..	..	1	..	..	1	1	..	1	..	..	..	..	..	..	..	..	4	..	4	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..
11B Influenza, without pneumonic complications specified	3	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	3	..	..	2	..	1	..	3	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1
16C. Dysentery, due to other causes or of unspecified origin	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	5	..	1	..	..	..	..	..	..	2	2	..	..	..	..	..	..	3	2	..	2	1	2	..	2	3	..	..	..	..	..	1	..	..	..	1	2	..	1	..
Total deaths from tuberculosis	5	..	1	..	..	..	..	..	..	2	2	..	..	..	..	..	..	3	2	..	2	1	2	..	2	3	..	..	..	..	..	1	..	..	..	1	2	..	1	..
II.—General Diseases.																																								
Group Total	4	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	3	1	..	1	2	1	..	1	1	2	..	..	1	..	..	..	..	1	..	..	1	..	1	..
46. Malignant tumors, female genital organs	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	1	1	..	..	..	..	2	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Total deaths from cancer	3	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	2	1	..	1	2	..	..	..	1	2	..	..	1	..	..	..	..	1	..	..	1	..	..	..
57. Diabetes	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
III.—Diseases of the Nervous System.																																								
Group Total	9	1	1	..	..	..	1	..	..	..	..	1	1	2	2	..	..	6	3	..	5	..	3	1	3	5	1	..	..	1	..	2	..	1	..	..	..	3	1	1	..
71A. Meningitis	3	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..
74A. Cerebral haemorrhage, apoplexy	3	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	3	..	..	2	..	..	1	..	2	1	..	..	..	..	..	..	..	..	..	..	1	1	1	..
75B. Other forms of paralysis	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	1	..	..	..	2	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
77. Other forms of mental alienation	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System.																																									
Group Total	9								1					3	4	1		3	6		5	1	2	1	2	2	5			1	1			1		1		2	1	2	
90. Other diseases of the heart	3								1					2				1	2		1		1	1	2	1				1								1	1	
91b. Arteriosclerosis	6													1	4	1		2	4		4	1	1			1	5				1			1		1	2		1	
V.—Diseases of the Respiratory System.																																								
Group Total	12	1					1				2	2	1	4	1			7	5		8	2	1	1	4	8				1	2	1		2	1			1	2		2
99d. Bronchitis, not otherwise defined, over 5 years of age	1												1					1			1				1												1			
100a. Broncho-pneumonia	4	1									1		1	1				2	2		3		1		1	3					1			1				1		1
101b. Pneumonia, not otherwise defined	5						1				1			3				3	2		3	1		1	2	3				1	1	1		1				1		
102. Pleurisy	1											1							1			1				1														1
105. Asthma	1											1						1			1					1								1						
VI.—Diseases of the Digestive System.																																								
Group Total	10	1					2			1	1		3	1	1			3	7		6	1	2	1	4	6				2	1				1	1	3	1		1
112. Other diseases of the stomach (cancer excepted)	2									1			1						2			1	1			2											1		1		
113. Diarrhoea and enteritis (under 2 years)	1	1																1			1				1												1			
114. Diarrhoea and enteritis (over 2 years)	1												1						1		1					1				1									
117. Appendicitis and typhlitis	2						2												2		2				2						1				1				
118b. Intestinal obstruction	1													1				1					1			1				1									
119b. Other diseases of the intestine	1										1								1		1					1											1			1
124. Other diseases of the liver	1														1				1					1		1													
126. Peritonitis of unstated origin	1												1					1			1				1												1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	2											1			1			1	1		1	1				2					1				1					
129. Chronic nephritis (Bright's disease)	1														1				1		1					1									1					
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1											1						1				1				1				1									

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition.					Month.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widowed.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	430	117	12	6	4	3	8	6	9	28	14	15	26	42	71	69		224	206		339	39	45	7	206	139	85			37	37	42	32	33	33	30	39	26	46	35	40
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	47	2	1		2	2	6	2	3	11	5		6	3	3	1		25	22		41	3	2	1	27	18	2			3	1	2	7	3	9	4	4				
1A. Typhoid fever	6							1	1	1	1		1	1				5	1		5			1	3	3				1	1	1				1	1		1		
9. Whooping cough	1						1											1			1				1														1		
10. Diphtheria	7				1	1	3			1	1							2	5		7				6	1				1						1		4	1		
11A. Influenza, with pneumonic complications specified	1	1																1			1				1							1									
11B. Influenza, without pneumonic complications specified	3										1		2					2	1		3					3							1		1		1				
15. Cholera nostras	1														1				1				1			1									1						
16C. Dysentery, due to other causes or of unespecified origin	4	1						1						1		1		1	3		2	1	1		2	1	1									2		2			
25. Purulent infection, septicaemia	1		1																1			1			1								1							
29. Tetanus	1				1													1			1				1												1			
31. Tuberculosis of the respiratory system	21					1	2		2	8	2		3	1	2			11	10		20	1			12	8	1			1		1	4	4		1	2	1	4	
34. Tuberculosis of the vertebral column	1									1								1			1					1										1				
Total deaths from tuberculosis	22					1	2		2	9	2		3	1	2			12	10		21	1			12	9	1			1		1	4	4		1	3	1	2	1	4
II.—General Diseases.																																								
Group Total	36	1	1					1		1	1	7	6	7	9	2		15	21		31	3	1	1	6	15	15			5	2	2	2	3	3	3	4	2	4	4	2
43. Malignant tumors of the buccal cavity	2												1	1				1	1		2					1	1			1						1				
44. Malignant tumors of the stomach and liver	4											1	1	1		1		4			3			1		3	1			1		1				1	1			
45. Malignant tumors of the peritoneum, intestines and rectum	2													1	1			1	1		2				1		1										1		1	
46. Malignant tumors of the female genital organs	3											1	1		1				3		3					1	2			1			1						1	
47. Malignant tumors of the breast	3											1		1	1				3		3					1	2										2			
48. Malignant tumors of the skin	1														1			1			1						1								1					
49. Malignant tumors of other or unspecified organs	9											2	1		5	1		2	7		7	2				4	5			2		1		2		1	1		2	

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RENFREW—Continued.

Number of Columns.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	47	19	4	4	1	..	..	1	..	2	..	2	2	6	3	3	..	25	23	..	42	1	3	1	30	10	7	..	..	3	2	6	1	..	1	3	5	8	9	3	6
108A. Diseases of the teeth and gums	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
108B. Other diseases of the buccal cavity and its annexa	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
112. Other diseases of the stomach (cancer excepted)	5	..	..	..	1	..	..	..	..	..	..	..	1	1	1	1	..	4	1	..	3	..	2	..	1	4	..	..	..	..	..	1	..	..	..	1	..	1	1	1	..
113. Diarrhoea and enteritis (under 2 years)	19	15	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	8	..	18	..	..	1	19	..	..	..	..	1	..	3	..	..	..	1	3	6	3	..	2
114. Diarrhoea and enteritis (over 2 years)	7	..	..	3	..	..	..	..	..	..	..	2	1	1	..	..	..	5	4	..	6	..	1	..	3	..	4	..	..	..	..	..	..	..	..	..	2	1	2	..	2
117. Appendicitis and typhlitis	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
118B. Intestinal obstruction	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
119B. Other diseases of the intestine	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	1	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..
122B. Cirrhosis not returned as alcoholic	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
124. Other diseases of the liver	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3	..	..	3	..	..	..	..	2	1	..	..	..	1	..	..	..	..	1	..	..	1	..	..
126. Peritonitis of unstated origin	2	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																								
Group Total	18	..	..	1	..	1	..	..	1	1	..	1	1	1	8	3	..	11	7	..	11	2	4	1	6	11	1	..	..	1	..	2	..	1	1	1	2	..	1	5	4
128. Acute nephritis	3	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	3	..	..	2	..	..	1	3	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1
129. Chronic nephritis (Bright's disease)	7	..	..	..	..	..	..	1	..	..	..	1	1	..	4	..	..	1	6	..	5	..	2	..	1	6	..	..	..	..	..	1	..	1	1	..	..	1	2	1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
132. Calculi of the urinary passages	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
133. Diseases of the bladder	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
135. Diseases of the prostate	5	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5	..	..	2	1	2	..	1	3	1	..	..	1	..	..	..	..	..	1	..	..	2	1
VIII.—The Puerperal State.																																								
Group Total	4	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	4	..	..	4	..	..	..	..	4	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1
145C. Other accidents of labor	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
146. Puerperal sepsis	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
148. Puerperal albuminuria and convulsions	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..

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RENFREW—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
179. Burns (conflagration excepted)	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
180. Accidental mechanical suffocation	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
182. Accidental drowning	7	.	1	.	.	.	1	.	.	4	.	.	.	.	1	.	.	7	.	.	7	.	.	.	5	2	.	.	.	.	.	.	.	1	1	3	1	.	1	.	.
183. Accidental injury by firearms (war casualties excepted)	2	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	1	1	.	1	.	.	1	1	1	.	.	.	.	.	.	1	.	.	.	.	1	.	.
Other forms of crushing (vehicles, railways, landslides, etc.)	5	.	.	.	.	.	.	.	.	2	.	.	1	1	1	.	.	5	.	.	3	.	1	1	2	2	1	.	.	1	.	1	.	.	1	.	.	1	.	.	1
188A. Railroad accidents	4	.	.	.	.	.	.	.	.	2	.	.	.	1	1	.	.	4	.	.	2	.	1	1	2	1	1	.	.	1	.	1	.	.	.	.	1	.	.	1
188C. Automobile accidents	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.
201C. Fracture (cause not specified)	3	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2	.	1	2	.	2	1	.	.	1	1	1	.	.	.	.	1	.	.	1	.	1	.	.	.
202. Other external violence	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
XV.—Ill-defined Diseases.																																									
Group Total	16	13	.	.	.	.	.	.	.	.	.	.	.	2	.	1	.	9	7	.	14	.	2	.	13	2	1	.	.	.	1	1	1	2	3	2	2	1	1	2	.
205A. Cause of death unstated or ill-defined	16	13	.	.	.	.	.	.	.	.	.	.	.	2	.	1	.	9	7	.	14	.	2	.	13	2	1	.	.	.	1	1	1	2	3	2	2	1	1	2	.

CAUSES OF DEATH IN THE COUNTY OF SIMCOE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**600**	**103**	**11**	**8**	**5**	**3**	**21**	**9**	**17**	**31**	**32**	**32**	**40**	**85**	**100**	**102**	**1**	**289**	**311**		**468**	**101**	**15**	**16**	**265**	**211**	**124**			**52**	**52**	**57**	**64**	**45**	**44**	**49**	**61**	**52**	**46**	**34**	**44**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	78	12	2	3	..	1	6	3	6	14	11	12	3	4	..	1	..	35	43	..	69	4	3	2	54	22	2	..	..	8	7	5	6	8	7	3	10	7	12	2	3
1A. Typhoid fever	3	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	3	..	3	..	..	..	1	2	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..
6. Smallpox	3	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	3	..	3	..	..	..	1	2	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..
7. Measles	3	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3	..	..	..	3	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..
8. Scarlet fever	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
10. Diphtheria	9	..	..	1	..	1	3	2	..	1	1	..	..	..	..	..	..	2	7	..	7	..	..	2	9	..	..	..	..	2	..	..	1	..	..	1	..	2	1	1
11A. Influenza with pneumonic complications specified	3	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	..	3	..	..	..	3	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	3	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	3	..	..	3	..	..	..	2	1	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..
15. Cholera nostras	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
16C. Dysentery due to other causes or of unspecified origin	6	3	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	5	..	5	1	..	..	3	2	1	..	..	..	..	..	..	..	..	..	1	5	..	..	..
21. Erysipelas	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	1	..	1	1	..	..	..	2	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
29. Tetanus	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	33	..	..	..	..	..	2	1	5	9	8	6	1	1	..	..	..	16	17	..	30	1	2	..	23	9	1	..	..	3	2	..	3	4	4	2	7	2	4	1	1
32. Tuberculosis of the meninges and central nervous system generally	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
34. Tuberculosis of the vertebral column	2	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
37B. Disseminated tuberculosis, chronic	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	39	1	..	2	..	..	3	1	5	11	8	6	1	1	..	..	..	20	19	..	34	2	3	..	29	9	1	..	..	3	3	..	3	6	6	2	7	3	4	1	1
II.—General Diseases.																																								
Group Total	72	..	..	..	..	..	2	..	3	4	3	9	13	18	13	7	..	27	45	..	58	10	3	1	16	41	15	..	..	4	7	7	9	3	5	2	13	3	9	3	
43. Malignant tumors of the buccal cavity	5	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	..	5	..	..	5	..	..	..	..	3	2	..	..	..	..	..	1	1	..	1	..	..	2	..	..
44. Malignant tumors of the stomach and liver	9	..	..	..	..	..	..	..	..	..	..	1	1	3	2	2	..	2	7	..	6	3	..	..	2	4	3	..	..	..	..	..	1	1	..	1	..	1	2	2	..	1

SIMCOE—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
45. Malignant tumors of the peritoneum, intestines and rectum	3												2	1				3			3				1	2										2			1	
47. Malignant tumors of the breast	4											1	2		1				4		3	1				4				2							1	1	
48. Malignant tumors of the skin	2													1		1		1	1		1	1				2									1		1		
49. Malignant tumors of other or unspecified organs	10									1		2	2	2	3			4	6		7	2		1	2	6	2			1			3	1	1		3			1
Total deaths from cancer	33									1		5	7	8	7	5		15	18		25	7		1	5	19	9			1	2	2	5	1	3	1	3	7	3	3	2
51. Rheumatic fever	5							2						1	2			2	3		4		1		3	1	1					1	1			1			1	1
52. Chronic rheumatism, osteo-arthritis, gout	2															2		1	1			1	1				2						1	1					
56. Rickets	1					1													1		1				1					1									
57. Diabetes	7					1				1	1		1	3				2	5		6	1			2	5				1	2					1		2	
58A. Pernicious anaemia	13										1	3	1	5	3			6	7		11	1	1		2	10	1			1	2	1	1	1		1	2		3	
58B. Other anaemias and chlorosis	4									1			1	1	1			1	3		4				1	2	1			1		1					2			
60A. Exophthalmic goitre	3									1	1		1						3		3				1	2					2			1					
60B. Other diseases of the thyroid gland	2											1	1						2		2					2									1	1			
63. Diseases of the adrenals	1												1						1		1						1								1				
69. Other general diseases	1								1										1		1				1											1			
III.—Diseases of the Nervous System.																																								
Group Total	57	5	1	1			2	3	3	1	2		8	8	11	12		29	28		46	9	2		24	20	13			2	3	8	9	7	1	6	5	6	4	1	5
70. Encephalitis	1			1														1			1				1									1						
71A. Meningitis	2	2																1	1		2				2							1		1					
72. Tabes dorsalis (locomotor ataxy)	1													1				1			1					1					1							
73. Other diseases of the spinal cord	2													1	1			2			1	1				2						1	1					
74A. Cerebral haemorrhage, apoplexy	19		1								1		2	2	6	7		9	10		13	4	2		4	8	7				2		2	3		2	4	2	3	1
75A. Hemiplegia	5													3		2		2	3		4	1			1	2	2			1		1		1						1
75B. Other forms of paralysis	2															2			2		2				1		1				2								
77. Other forms of mental alienation	2													1	1			1	1		2					2														2
78. Epilepsy	6							3	2			1						2	4		6				6						2				1		3			
79. Convulsions (non-puerperal; 5 years and over)	1									1									1		1					1						1								
80. Infantile convulsions (under 5 years of age)	3	3																2	1		3				3					1		1		1					
82A. Hysteria and neuralgia	1														1				1		1						1					1							
82B. Neuritis	1														1				1		1						1					1							
83. Cerebral softening	3														2	1		3			3				1	1	1									1			2
84. Other diseases of the nervous system	7						2		1				4					4	3		5	2			5	2				1		1	2			1	1		1	
86A. Diseases of the ears	1												1					1			1					1									1				
IV. Diseases of the Circulatory System.																																							
Group Total	102						1	1	2	1	3	2	7	27	35	23		50	52		70	26		6	20	48	34			12	11	6	8	8	7	15	8	6	6	4	11
88. Acute endocarditis and myocarditis	3							1	1		1				2				3		3				3					2		1				1			1
89. Angina pectoris	3													2		1		3			3					2	1			2						1			
90. Other diseases of the heart	59								1	1		2	4	17	22	12		30	29		40	17		2	9	34	16			4	6	3	5	4	5	12	5	2	5		8
91A. Aneurism	1										1							1			1					1														

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1															1			1		1						1						1								
133. Diseases of the bladder	2													1		1		2				2			2				1	1										
135. Diseases of the prostate	5														3	2		5			3	1		1	1	1	3				1		1			1		1		1
138. Salpingitis and pelvic abscess	1										1								1		1					1							1							
VIII.—The Puerperal State.																																									
Group Total	2									1	1								2		2					2											2				
148. Puerperal albuminuria and convulsions	2									1	1								2		2					2											2				
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	1															1			1			1				1												1			
151. Gangrene	1															1			1			1				1												1			
X.—Diseases of the Bones and Organs of Locomotion.																																									
Group Total	1													1				1					1		1											1					
156. Diseases of the bones (tuberculosis and rickets excepted)	1													1				1					1		1											1				
XI.—Malformations.																																									
Group Total	14	13	1															5	9		14				14					1	3	1	2	2		1	2		1		1
159A. Congenital malformations not otherwise specified (still-births excepted)	10	9	1															3	7		10				10						2	1	2	2		1		1		1
159B. Hydrocephalus	1	1																	1		1				1					1										
159C. Congenital malformations of the heart	3	3																2	1		3				3						1				1	1				
XII.—Diseases of Early Infancy.																																									
Group Total	39	39																15	24		38			1	39					3	3	7	5	2	2	2	4	1	3	2	5
160B. Congenital debility, icterus and scleroma	11	11																6	5		10			1	11						2	2	2			1		2		2
161A. Premature birth	22	22																8	14		22				22					3	1	2	3	1	2	2	3	1	1		3
161B. Injury at birth	3	3																	3		3				3							1							2		
162. Other diseases peculiar to early infancy	3	3																1	2		3				3							2		1						

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CAUSES OF DEATH IN THE COUNTY OF STORMONT, DUNDAS AND GLENGARRY, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	647	125	17	9	4	4	16	9	8	31	27	24	49	67	129	128		321	326		586	36	13	12	275	217	153		2	59	49	57	61	60	56	45	57	61	45	62	44
I.—Endemic, Epidemic, and Infectious Diseases																																								
Group Total	102	7	3	2	4	2	7	5	6	19	11	5	7	6	13	5	..	47	55	...	96	2	4	...	55	34	13	..	...	6	11	10	6	14	6	7	10	8	7	11	6
1A. Typhoid fever	3	....	..	..	..	..	..	..	2	1	..	..	....	..	..	..	..	2	1	...	3	..	..	...	2	1	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..
8. Scarlet fever	1	....	..	..	..	..	1	..	..	....	..	..	....	..	..	..	..	1	..	...	1	..	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	3	3	..	..	..	..	..	..	..	....	..	..	....	..	..	..	..	1	2	...	3	..	..	...	3	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..
10. Diphtheria	17	1	..	1	4	2	5	4	..	....	..	..	....	..	..	..	..	11	6	...	15	..	2	...	17	..	..	..	..	..	1	1	2	1	1	1	1	3	2	3	1
11A. Influenza with pneumonic complications specified	10	....	..	..	..	..	..	..	..	1	3	2	....	1	3	..	..	3	7	..	10	..	..	...	3	6	1	..	..	..	1	2	..	2	..	..	..	..	1	2	2
11B. Influenza without pneumonic complications specified	12	2	..	..	..	..	..	..	..	1	..	1	2	..	4	2	..	4	8	...	10	1	1	..	6	3	3	..	..	1	2	1	1	3	1	..	1	..	..	2	..
16C. Dysentery due to other causes or of unspecified origin	3	....	..	..	..	..	..	..	..	....	..	..	....	1	1	1	..	2	1	..	3	..	..	...	..	1	2	..	..	..	..	..	..	..	..	..	2	1	..	..	..
21. Erysipelas	1	....	..	..	..	..	..	..	..	....	..	..	1	..	..	..	..	1	..	...	..	..	1	...	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	....	..	..	..	..	..	..	..	....	..	..	....	..	1	..	..	1	..	...	1	..	..	...	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
29. Tetanus	1	....	..	..	..	..	..	..	..	....	..	1	....	..	..	..	..	1	..	...	1	..	..	...	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	39	....	..	1	..	..	..	..	4	13	8	1	4	4	2	2	..	17	22	...	38	1	..	...	14	20	5	..	..	2	3	4	3	4	3	4	5	3	2	4	2
32. Tuberculosis of the meninges and central nervous system generally	4	1	2	..	..	..	1	..	..	....	..	..	....	..	..	..	..	1	3	...	4	..	..	...	4	..	..	..	..	..	..	1	..	1	..	..	1	1	..	..	..
33. Tuberculosis of the intestines and peritoneum	3	....	..	..	..	..	..	1	..	1	..	..	....	..	1	..	..	1	2	...	3	..	..	...	2	..	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..
36C. Tuberculosis of the lymphatic system (mesenteric and retro-peritoneal glands excepted)	1	....	1	..	..	..	..	..	..	....	..	..	....	..	..	..	..	..	1	...	1	..	..	...	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
36D. Tuberculosis of the genito-urinary system	3	....	..	..	..	..	..	..	..	2	..	..	....	..	1	..	..	1	2	...	3	..	..	...	2	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	1
Total deaths from tuberculosis	50	1	3	1	..	..	1	1	4	16	8	1	4	4	4	2	..	20	30	...	49	1	..	...	23	20	7	..	..	2	4	5	3	7	4	5	6	4	3	4	3
II.—General Diseases.																																								
Group Total	66	....	1	1	..	..	1	..	..	1	2	6	15	19	14	6	..	36	30	...	59	5	1	1	14	39	13	..	..	7	2	2	15	5	3	4	5	11	4	5	3
43. Malignant tumors of the buccal cavity	3	....	..	..	..	..	..	..	..	....	..	..	....	..	3	..	..	3	..	...	2	1	..	...	1	2	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	16	....	..	..	..	..	..	..	..	..	..	3	2	4	6	1	..	12	4	...	13	2	1	...	1	11	4	..	..	1	2	..	2	..	1	1	3	3	1	1	1

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STORMONT, DUNDAS AND GLENGARRY—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
99c. Bronchitis, not otherwise defined, under 5 years of age	3	3																1	2		3				3							1				1				
99d. Bronchitis, not otherwise defined, over 5 years of age	2														2			1	1		2				1	1			1				1							
100a. Broncho-pneumonia	12	8	3												1			6	6		12				11		1			2	2	4		2		1	1			
101a. Pneumonia, lobar	7	1		1							2	1		1		1		5	2		5	1	1		3	3	1				1	3	1		1		1				
101b. Pneumonia, not otherwise defined	21	2		1						1	2		2	4	6	3		13	8		20			1	7	10	4			1	2	6	3	1	3		1		2		2
102. Pleurisy	1										1							1			1					1							1								
103. Congestion and haemorrhagic infarct of the lung	1												1					1			1					1														
107c. Other diseases of the respiratory system tuberculosis excepted) not included in 107a or 107b	1															1			1		1						1									1					
VI.—Diseases of the Digestive System																																								
Group Total	55	27	5	2			2	1		1			1	3	5	8		28	27		55				38	6	11			1	1	1	2	1	3	6	10	16	4	7	3
108a. Diseases of the teeth and gums	1														1			1			1					1													1	
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	3			1			1							1				1	2		3				2	1							1				1	1	
111a. Ulcer of the stomach	3												1		1	1		1	2		3					1	2			1		1						1	
112. Other diseases of the stomach (cancer excepted)	3	1													1	1		2	1		3				1	1	1			1								1	1
113. Diarrhoea and enteritis (under 2 years)	30	26	4															18	12		30				30								2	1	1	6	8	10	1	1	
114. Diarrhoea and enteritis (over 2 years)	10			1			1			1				2	2	3		2	8		10				3		7									1	4	2	1	2
116e. Other parasites of the intestines	1		1															1		1	1				1													1		
117. Appendicitis and typhlitis	1							1										1			1				1															
118a. Hernia	2															2		1	1		2					1	1							1				1		
123. Biliary calculi	1															1		1			1					1											1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	33	1								1	2		4	9	6	10		19	14		27	5		1	6	14	11		2	2	1	6	3	4	5	1	2	1	2	5	1
128. Acute nephritis	2	1											1					2			2				1	1									1				1	
129. Chronic nephritis (Bright's disease)	28									1	2		2	8	5	10		14	14		22	5		1	5	11	10		2	2	1	6	3	3	3		2	1	2	4	1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	2												1	1				2			2					1	1							2						
135. Diseases of the prostate	1														1			1			1					1								1						
VIII.—The Puerperal State.																																								
Group Total	3										2	1							3		3					3				1	1							1		
144. Puerperal haemorrhage	1											1							1		1					1				1										
145c. Other accidents of labor	1										1								1		1					1												1		
146. Puerperal sepsis	1										1								1		1					1				1										

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CAUSES OF DEATH IN THE DISTRICT OF SUDBURY, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	217	78	11	7	2	3	16	12	12	17	15	9	9	16	5	3	2	124	93		176	8	15	18	165	42	9		1	21	24	14	15	18	19	18	24	18	12	16
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	45	3	3	3	1	2	11	5	2	3	4	3	3	1	1	..	..	22	23	...	39	1	3	2	34	10	1	...	...	3	3	2	4	4	5	3	7	5	5	3	1
8. Scarlet fever	3	....	..	1	..	1	..	1	..	....	....	....	....	....	....	....	....	1	2	...	3	....	....	....	3	....	....	....	....	..	1	....	....	....	....	....	2	....	....	....	....
10. Diphtheria	20	....	3	1	1	1	11	2	..	1	....	....	....	....	....	....	....	7	13	...	20	....	....	....	20	....	....	....	....	1	1	..	3	1	4	1	3	2	3	..	1
11A. Influenza, with pneumonic complications specified	2	....	..	..	..	..	..	..	..	....	1	..	1	..	..	..	..	1	1	...	1	....	1	....	....	2	....	....	....	..	..	1	..	1	..	..	..	..	..	..	..
15. Cholera nostras	2	1	..	1	..	..	..	..	..	....	....	....	....	....	....	....	....	1	1	...	2	....	....	....	2	....	....	....	....	..	..	..	..	..	..	..	1	1	..	..	..
16c. Dysentery, due to other causes or of unspecified origin	1	1	..	..	..	..	..	..	..	....	....	....	....	....	....	....	....	1	....	...	1	....	....	....	1	....	....	....	....	..	..	..	..	..	..	..	..	..	1	..	..
21. Erysipelas	1	1	..	..	..	..	..	..	..	....	....	....	....	....	....	....	....	1	....	...	1	....	....	....	1	....	....	....	....	..	..	..	..	..	..	..	1	..	..	1	..
25. Purulent infection, septicaemia	1	....	..	..	..	..	..	..	..	....	1	..	....	....	....	....	....	1	....	...	1	....	....	....	....	1	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	15	....	..	..	..	..	..	2	2	2	2	3	2	1	1	..	..	9	6	...	10	1	2	2	7	7	1	....	....	2	1	1	1	2	1	1	1	2	1	2	..
Total deaths from tuberculosis	15	....	..	..	..	..	..	2	2	2	2	3	2	1	1	..	..	9	6	...	10	1	2	2	7	7	1	....	....	2	1	1	1	2	1	1	1	2	1	2	..
II.—General Diseases.																																								
Group Total	10	1	1	1	..	..	..	..	..	1	3	..	....	3	..	..	..	4	6	...	9	....	1	....	5	5	....	....	....	1	1	1	1	1	1	1	2	..	..	..	1
45. Malignant tumors, peritoneum, intestines and rectum	1	....	..	..	..	..	..	..	..	....	1	..	....	....	....	....	....	....	1	...	1	....	....	....	1	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	1
46. Malignant tumors, female genital organs	2	....	..	..	..	..	..	..	..	....	1	..	....	1	..	..	..	....	2	...	2	....	....	2	....	2	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..
47. Malignant tumors, breast	1	....	..	..	..	..	..	..	..	....	....	....	....	1	..	..	..	....	1	...	1	....	....	....	....	1	....	....	....	..	..	..	..	..	..	..	1	..	..	..	..
Total deaths from cancer	4	....	..	..	..	..	..	..	..	....	2	..	....	2	..	..	..	....	4	...	4	....	....	....	....	4	....	....	....	1	..	..	..	..	1	..	1	..	..	..	1
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1	....	..	..	..	..	..	..	..	....	....	....	....	1	..	..	..	1	....	...	1	....	....	....	....	1	....	....	....	..	..	..	..	..	..	..	1	..	..	..	..

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SUDBURY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
117. Appendicitis and typhlitis	1								1										1		1				1												1			
118A. Hernia	1								1									1						1	1									1						
118B. Intestinal obstruction	2							1		1								2				1	1		2										1	1				
119B. Other diseases of the intestine	1	1																	1		1				1											1				
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	6			1	1	1	1				1			1				4	2		6				4	2					2		1	1		1			1
128. Acute nephritis	4			1	1	1	1											2	2		4				4						2			1		1			
129. Chronic nephritis (Bright's disease)	2										1			1				2			2					2						1							1
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	2	1											1					1	1		1			1	2										1	1				
151. Gangrene	1												1					1						1	1											1				
155. Other diseases of the skin and its annexa	1	1																	1		1				1										1					
XII.—Diseases of Early Infancy.																																								
Group Total	36	36																20	16		36				36					4	5	4	2	5	2	3		4	1	1	5
160B. Congenital debility, icterus and scleroma	12	12																9	3		12				12					1	2		1		1		4			3
161A. Premature birth	15	15																5	10		15				15					1	2	2		3	2	1			1	1	2
161B. Injury at birth	3	3																2	1		3				3					1		1		1						
162. Other diseases peculiar to early infancy	6	6																4	2		6				6					1	1	1	1	1		1				
XIII.—Old Age.																																								
164. Senility total	3														1	2			3		2	1				1	2				1					1			1		
XIV.—External Causes.																																								
Group Total	28	1					2	1	7	9	3	4					1	26	2		15	3	4	6	22	5			1	2	2	3	1	1	4	6	1	3	3		2
170. Suicide by firearms	1											1						1					1			1											1			

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CAUSES OF DEATH IN THE COUNTY OF THUNDER BAY, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	171	28	8	5	4	1	8	4	8	15	19	14	14	16	16	8	3	104	67		128	25	12	6	84	62	24		1	17	18	16	15	17	9	13	26	15	10	9	6
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	42	4	1	2	3	..	3	1	6	7	3	5	2	4	..	1	..	26	16	...	32	5	5	...	27	14	1	...	...	7	6	4	1	5	1	2	10	2	3	1	..
1 A. Typhoid fever	8	....	..	..	..	..	..	..	2	1	..	2	....	3	..	..	..	6	2	...	5	2	1	..	5	2	.. 1	..	..	1	1	..	..	2	1	1	2	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..	2	...	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	5	....	..	..	..	..	3	1	1	..	..	..	....	..	..	..	..	1	4	...	5	..	..	..	5	..	..	..	..	1	2	..	..	1	..	..	1	..	..	..	..
11B. Influenza, without pneumonic complications specified	6	1	1	1	..	..	..	..	..	2	..	1	....	..	..	..	..	4	2	...	5	..	1	...	5	1	..	..	..	..	1	2	..	..	..	..	2	..	1	..	..
25. Purulent infection, septicaemia	2	....	..	..	..	..	..	..	..	..	1	..	....	1	..	..	..	1	1	...	..	1	1	...	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
31. Tuberculosis of the respiratory system	13	...	..	1	2	..	..	..	2	2	1	2	2	..	..	1	..	10	3	...	11	1	1	...	7	6	..	..	..	3	2	1	1	1	..	..	2	..	2	1	..
32. Tuberculosis, meninges and central nervous system generally	1	....	..	..	1	..	..	..	..	..	..	..	....	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	3	....	..	..	..	..	..	..	1	1	1	..	....	..	..	..	..	1	2	...	1	1	1	...	1	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	1	....	..	..	..	..	..	..	..	1	..	..	....	..	..	..	..	1	..	...	1	..	..	...	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	18	....	..	1	3	..	..	..	3	4	2	2	2	..	..	1	..	13	5	...	14	2	2	..	9	9	..	..	..	5	2	2	1	2	..	..	2	1	2	1	..
38D. Syphilis, stage not indicated	1	1	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	1	..	...	1	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
II.—General Diseases.																																								
Group Total	8	....	..	..	..	..	1	..	..	1	2	1	....	2	1	..	..	3	5	...	6	2	..	..	2	5	1	..	..	..	3	1	..	..	1	..	1	1	..	1	..
44. Malignant tumors, stomach and liver	1	....	..	..	..	..	..	..	..	..	..	..	....	..	1	..	..	1	..	...	1	..	..	...	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
45. Malignant tumors, peritoneum, intestines and rectum	1	....	..	..	..	..	..	..	..	..	..	..	....	1	..	..	..	1	..	...	1	..	..	...	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
46. Malignant tumors of the female genital organs	1	....	..	..	..	..	..	..	..	..	1	..	....	..	..	..	..	..	1	...	1	...	..	...	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	2	....	..	..	..	..	..	..	..	1	..	..	....	1	..	..	..	..	2	...	..	2	..	...	..	1	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..
Total deaths from cancer	5	....	..	..	..	..	..	..	..	..	2	..	....	..	2	1	..	2	3	...	3	2	..	..	1	3	1	..	..	1	1	..	..	1	..	1	1	..	..	..	..
57. Diabetes	1	....	..	..	..	..	1	..	..	..	..	..	....	..	..	..	..	..	1	...	1	..	..	...	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
111A. Ulcer of the stomach	1							1										1			1				1												1			
112. Other diseases of the stomach (cancer excepted)	2		1										1					2			1	1			1	1										1		1		
113. Diarrhoea and enteritis (under 2 years)	10	6	4								1							7	3		10				10				1		2			1	1	4		1	
114. Diarrhoea and enteritis (over 2 years)	2										1	1						1	1		2					2							1					1	
117. Appendicitis and typhlitis	3							1			1		1						3		2	1			1	1	1			1		1			1				
118B. Intestinal obstruction	2		1												1				2		1	1			1		1							1		1		
122B. Cirrhosis not returned as alcoholic	2												2					1	1			1		1	1	1				1						1		
126. Peritonitis of unstated origin	1									1									1		1					1			1									
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																							
Group Total	9							1		1	2		1	2	2			7	2		6	2	1		2	5	2			1		2	2	1		1	1	1	
129. Chronic nephritis (Bright's disease)	4							1			2		1					3	1		4				2	2				1		1	2						
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1													1				1				1				1				1								
133. Diseases of the bladder	1													1				1					1			1							1						
135. Diseases of the prostate	2													1	1			2			2					1	1									1		1	
141. Diseases of the female genital organs	1									1									1			1				1											1		
VIII.—The Puerperal State.																																							
Group Total	2									1	1								2		1	1				2										1			1
144. Puerperal haemorrhage	1										1								1			1				1												1	
148. Puerperal albuminuria and convulsions	1									1									1		1					1										1			
XI.—Malformations.																																							
Group Total	1			1															1		1				1										1				
159B. Hydrocephalus	1			1															1		1				1										1				
XII.—Diseases of Early Infancy.																																							
Group Total	12	12																6	6		12				12				1	2		3	2	1	1	1	1		
160B. Congenital debility, icterus and scleroma	5	5																2	3		5				5					2				1	1				
161A. Premature birth	7	7																4	3		7				7				1			3	2				1		

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CAUSES OF DEATH IN COUNTY OF TEMISKAMING—1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**480**	**208**	**25**	**6**	**6**	**10**	**22**	**8**	**16**	**31**	**34**	**22**	**31**	**20**	**23**	**18**		**286**	**194**		**401**	**33**	**32**	**14**	**332**	**120**	**27**		**1**	**44**	**32**	**54**	**42**	**32**	**34**	**47**	**51**	**46**	**38**	**21**	**39**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	100	30	4	1	3	5	14	4	4	14	6	5	5	1	2	2	..	61	39	...	81	6	10	3	75	21	4	...	...	9	7	12	18	8	5	7	11	8	5	5	5
1A. Typhoid fever	7	...	...	...	...	..	1	..	1	3	..	2	...	...	...	...	..	5	2	...	5	2	...	...	3	4	...	...	...	...	...	...	1	1	..	1	1	1	1	1
1B. Paratyphoid fevers	1	...	...	...	...	..	...	..	1	...	...	...	...	...	...	...	..	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	..
8. Scarlet fever	1	...	...	...	...	..	1	..	...	...	...	...	...	...	...	...	..	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..
9. Whooping cough	11	10	...	...	1	..	...	..	...	...	...	...	...	...	...	...	..	6	5	...	11	...	...	...	11	...	...	...	...	1	..	3	1	1	..	1	2	..	2	..
10. Diphtheria	17	1	..	1	1	2	9	3	..	...	...	...	...	...	...	...	..	10	7	...	16	1	...	...	17	...	...	...	...	5	2	1	1	1	2	..	1	2	..	1
11A. Influenza with pneumonic complications specified	5	1	..	...	...	..	...	..	...	1	..	...	1	1	1	...	..	4	1	...	2	1	1	1	1	3	1	...	...	...	...	2	3	..	...	...	...	...	...	..
11B. Influenza without pneumonic complications specified	12	4	...	...	1	..	1	...	...	2	1	...	...	...	1	2	..	7	5	...	11	...	...	1	8	2	2	...	...	1	1	2	6	..	1	...	...	...	1	..
15. Cholera nostras	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	..
16C. Dysentery due to other causes or of unspecified origin	14	11	2	...	...	1	...	...	...	...	...	...	...	...	...	...	..	11	3	...	13	1	...	...	14	...	...	...	...	...	...	...	...	...	5	4	5	...	...	..
25. Purulent infection, septicaemia	2	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	..	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
31. Tuberculosis of the respiratory system	24	...	...	...	...	1	1	1	2	8	4	3	4	...	...	...	..	12	12	...	13	3	7	1	11	12	1	...	...	2	4	1	6	4	2	1	1	..	1	..	2
32. Tuberculosis of the meninges and central nervous system generally	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	..	1	1	...	2	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	..
33. Tuberculosis of the intestines and peritoneum	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	..	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	..
35. Tuberculosis of the joints	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	..	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..
37A. Disseminated tuberculosis—acute	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..
Total deaths from tuberculosis	29	1	2	...	...	1	2	1	2	8	5	3	4	...	...	...	..	14	15	...	18	3	7	1	16	12	1	...	...	2	4	3	6	5	2	1	3	..	1	..	2
II.—General Diseases.																																									
Group Total	16	...	..	3	...	..	1	..	..	...	3	3	3	2	..	1	..	8	8	...	12	1	1	2	6	10	...	...	...	1	..	2	3	2	1	1	1	1	2	1	1
43. Malignant tumors of the buccal cavity	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	..	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	..
44. Malignant tumors of the stomach and liver	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	..	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	..

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TEMISKAMING—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
100A. Broncho-pneumonia	17	11	2	..	..	..	..	..	..	..	1	..	2	1	..	..	..	11	6	..	16	..	1	..	13	4	..	..	..	3	3	..	1	2	3	..	1	..	3	1
100B. Capillary bronchitis	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
101A. Pneumonia, lobar	5	1	..	..	..	..	..	..	..	1	..	1	..	..	1	1	..	5	..	..	1	3	1	..	2	1	2	..	..	..	..	2	..	2	..	..	1	..	..	..
101B. Pneumonia not otherwise defined	18	2	5	..	..	2	..	..	..	..	2	3	3	..	1	..	..	8	10	..	14	2	2	..	10	7	1	..	..	5	1	4	2	1	1	..	1	..	..	3
102. Pleurisy	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2	..	1	1	..	..	..	..	2	..	..	1	..	..	..	..	1	..	..	..	..	..
105. Asthma	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
107A. Chronic interstitial pneumonia, occupational disease of lung	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
VI.—Diseases of the Digestive System.																																								
Group Total	72	47	8	1	1	..	3	2	..	1	2	..	2	1	2	2	..	41	31	..	70	2	..	..	62	6	4	..	..	5	3	3	4	3	4	11	20	13	4	1	1
108A. Diseases of the teeth and gums	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
108B. Other diseases of the buccal cavity and its annexa	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
112. Other diseases of the stomach (cancer excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..
113. Diarrhoea and enteritis (under 2 years)	53	46	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32	21	..	53	..	..	..	53	..	..	..	..	4	..	2	2	2	3	9	17	11	2	..	1
114. Diarrhoea and enteritis (over 2 years)	3	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..
117. Appendicitis and typhlitis	4	..	..	..	..	..	..	2	..	..	1	..	1	..	..	..	..	2	2	..	4	..	..	..	2	2	..	..	..	1	..	1	..	..	1	..	..	1	..	..	..
118B. Intestinal obstruction	5	1	..	..	..	..	1	..	..	..	1	..	..	..	1	1	..	3	2	..	4	1	..	..	2	1	2	..	..	..	1	..	1	..	..	1	1	1	..	..	..
122B. Cirrhosis not returned as alcoholic	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
123. Biliary calculi	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
124. Other diseases of the liver	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
VII.—Non-venereal Diseases of the Genito-urinary System and Its Annexa.																																								
Group Total	12	2	1	1	..	..	1	..	..	..	1	2	1	1	..	2	..	10	2	..	9	1	2	..	6	5	1	..	..	..	..	3	1	2	2	2	..	..	..	..	2
128. Acute nephritis	6	2	1	1	..	..	1	..	..	..	..	1	..	..	..	..	..	5	1	..	5	..	1	..	5	1	..	..	..	..	..	3	..	..	..	1	1	..	..	..	1
129. Chronic nephritis (Bright's disease)	5	..	..	..	..	..	..	..	..	..	1	1	1	1	..	1	..	4	1	..	4	..	1	..	1	4	..	..	..	..	..	..	1	1	1	1	..	..	..	..	1
133. Diseases of the bladder	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
VIII.—The Puerperal State.																																								
Group Total	11	..	..	..	..	..	..	..	1	4	6	..	..	..	..	..	..	..	11	..	9	2	..	..	..	11	..	..	..	..	1	..	2	..	1	..	3	..	1	1	2
143A. Abortion	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1

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TEMISKAMING—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
182. Accidental drowning	13	..	..	..	..	1	1	..	3	4	2	1	1	..	..	..	..	12	1	..	8	1	2	2	10	3	..	..	..	..	..	..	1	2	4	1	1	1	..	..
183. Accidental injury by firearms (war casualties excepted)	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
185. Accidental injury by fall	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
186A. Accidental injury in mines	3	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	3	..	..	1	1	1	..	1	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2
Other forms of crushing (vehicles, railways, landslides, etc.)	5	..	..	..	..	..	1	..	3	1	..	..	..	..	..	..	..	5	..	..	4	1	..	..	4	..	1	..	..	1	1	..	..	..	..	..	..	..	3	..	..
188A. Railroad accidents	3	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	3	..	..	2	1	..	..	3	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..
188F. Other accidental injuries by crushing, etc	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	..	..	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..
193. Excessive cold	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
194. Excessive heat	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
196. Electricity (lightning excepted)	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
199. Homicide by other means	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
201A. Dislocations	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
201C. Fracture (cause not specified)	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
202. Other external violence	4	..	..	..	1	1	..	1	..	..	..	1	..	..	..	..	..	3	1	..	3	..	..	1	3	1	..	..	..	..	2	..	..	..	..	1	..	..	..	1	..
XV.—Ill-defined Diseases.																																									
Group Total	13	2	2	..	..	..	1	..	..	..	2	1	1	3	..	1	..	8	5	..	11	1	1	..	5	7	1	..	..	2	1	..	..	1	2	..	1	..	2	..	4
204. Sudden death	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
205A. Cause of death unstated or ill-defined	12	2	2	..	..	..	1	..	..	..	2	1	1	3	..	..	..	7	5	..	10	1	1	..	5	7	..	..	..	2	1	..	..	1	2	..	1	..	2	..	3

CAUSES OF DEATH IN THE COUNTY OF VICTORIA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	220	47	1		3	1	4	1	5	9	10	12	16	35	35	40	1	120	100		171	42	3	4	96	81	43			13	24	23	24	13	10	14	21	26	16	21	15
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	25	5	..	..	2	1	..	..	..	3	2	1	2	3	4	2	..	17	8	..	20	3	2	..	11	10	4	..	..	..	4	3	1	2	1	1	3	1	2	5	2
7. Measles	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
11A. Influenza with pneumonic complications specified	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	1	..	2	..	..	..	1	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	6	1	..	..	..	..	..	..	..	..	..	..	2	..	1	2	..	5	1	..	4	2	..	..	2	2	2	..	..	..	1	2	..	..	..	..	..	..	..	3	..
15. Cholera nostras	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	1	..	1	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
30. Mycoses	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system																																								
31. Tuberculosis of the respiratory system	6	1	..	..	..	..	..	..	..	2	1	..	..	1	1	..	..	3	3	..	5	1	..	..	3	3	..	..	..	1	1	..	..	1	1	1	..	1	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	7	1	..	..	..	..	..	..	..	3	1	..	..	1	1	..	..	4	3	..	6	1	..	..	3	4	..	..	..	1	1	..	..	1	1	2	..	1	..	..
II.—General Diseases.																																								
Group Total	27	1	..	..	..	..	1	..	..	1	..	6	5	10	2	1	..	11	16	..	22	4	..	1	12	12	3	..	..	1	..	..	5	3	3	1	2	2	2	4	4
44. Malignant tumors of the stomach and liver	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	1	2	..	2	1	..	..	3	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1
45. Malignant tumors of the peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	1	2	..	2	1	..	..	2	1	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..
46. Malignant tumors of the female genital organs	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
47. Malignant tumors of the breast	3	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3	..	3	..	..	..	..	2	1	..	..	..	..	..	..	2	1	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..

VICTORIA—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Total deaths from cancer	12											4	1	4	2	1		4	8		8	3		1	6	5	1						1	3	3	1	1	1			2
51. Rheumatic fever	2									1		1						2			2				1	1							1								
52. Chronic rheumatism, osteo-arthritis, gout	1												1						1		1				1														1	
57. Diabetes	4						1						1	2				3	1		4				1	3			1							1		1	1
58A. Pernicious anaemia	3												1	2					3		2	1			1	1	1					1							1	1
58B. Other anaemias and chlorosis	1													1					1		1				1							1								
60B. Other diseases of the thyroid gland	2												1	1					2		2				1		1					1						1	
65A. Leukaemia	1											1						1			1					1												1		
69. Other general diseases	1	1																1			1				1												1			
III.—Diseases of the Nervous System.																																								
Group Total	20	2										1	2	5	7	3		8	12		14	5	1		4	8	8			3	2	2		2	2		1	1	3	1	3
71B. Cerebrospinal meningitis	1												1						1		1				1												1			
73. Other diseases of the spinal cord	2														2				2		2						2				1								1
74A. Cerebral haemorrhage, apoplexy	9											1	1	4	1	2		4	5		6	3				6	3				2		1	2		1		1	1
75A. Hemiplegia	1														1			1			1	1				1	1			1										
75B. Other forms of paralysis	2													1	1			1	1		1	1				1	1			1										
77. Other forms of mental alienation	2														2				2		1		1		1	1				1			1						
80. Infantile convulsions (under 5 years of age)	2	2																2			2				2				1								1		
83. Cerebral softening	1														1				1		1						1										1		
IV.—Diseases of the Circulatory System.																																							
Group Total	27								1	1			2	7	8	8		15	12		20	6			3	14	10			2	2	2	3	2		1	4	3	2	4	2
88. Acute endocarditis and myocarditis	2									1					1			2				2			1	1										1			1
90. Other diseases of the heart	16								1					6	6	3		7	9		13	3			2	6	8			2	2		2	2		1	2	2	1	2	
91A. Aneurism	1													1					1		1					1											1			
91B. Arteriosclerosis	7												1		1	5		6	1		3	3		1		5	2					2	1				1		2	1
94. Diseases of the veins (varices, haemorrhoid, phlebitis, etc.)	1												1						1		1					1												1		
V.—Diseases of the Respiratory System.																																							
Group Total	19	6								1	2	2	1		5	2		14	5		14	4		1	7	11	1			2	4	3	1		1	2	1		2	1	2
99A. Bronchitis, acute	1	1																1			1				1															1
99D. Bronchitis not otherwise defined over 5 years of age	3										1		1		1			2	1		2	1			1	2								1	1	1				
100A. Broncho-pneumonia	4	3													1			3	1		4				3	1				2	1				1				
101A. Pneumonia, lobar	3									1	1	1						2	1		2			1		3				1	1								
101B. Pneumonia not otherwise defined	7	2										1			2	2		5	2		4	3			2	4	1			2	1	1					1	1		
105. Asthma	1														1			1			1				1							1								

| | | |

VICTORIA—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	19	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	7	..	19	..	..	..	19	..	..	..	..	1	2	1	1	3	..	3	2	5	..	1	..
160B. Congenital debility, icterus and scleroma	8	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	..	8	..	..	..	8	..	..	..	..	..	1	1	1	1	..	1	..	3	..	..	..
161A. Premature birth	8	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	8	..	..	..	8	..	..	..	..	..	..	..	..	2	..	2	2	2	..	..	..
161B. Injury at birth	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
162. Other diseases peculiar to early infancy	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..
164. XIII.—Old Age.																																								
Group Total	15	..	..	..	..	..	..	..	..	..	..	..	..	..	1	14	..	8	7	..	5	9	..	1	4	4	7	..	..	1	3	2	4	..	1	..	1	1	2	..	..
XIV.—External Causes.																																								
Group Total	17	..	..	..	..	..	3	..	3	1	..	1	..	2	2	4	1	12	5	..	11	6	..	..	10	3	4	..	..	1	2	3	3	..	1	..	2	2	1	2	..
168. Suicide by hanging or strangulation	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	3	..	..	1	2	..	..	1	1	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..
169. Suicide by drowning	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
182. Accidental drowning	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
183. Accidental injury by firearms (war casualties excepted)	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
185. Accidental injury by fall	2	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Other forms of crushing (vehicles, railways, landslides, etc.	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
188F. Other accidental injuries by crushing, etc.	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
196. Electricity (lightning excepted)	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
201C. Fracture (cause not specified)	5	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	2	3	..	3	2	..	..	1	2	2	..	..	1	1	2	1	..	..	..	..	..	..	..	..
202. Other external violence	2	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2	..	..	1	1	..	..	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..
XV.—Ill-Defined Diseases.																																								
Group Total	6	..	..	..	..	..	..	..	..	..	2	..	..	3	1	..	..	3	3	..	6	..	..	..	2	4	..	..	..	..	1	1	..	..	..	1	..	1	1	1	..
205A. Cause of death unstated or ill-defined	6	..	..	..	..	..	..	..	..	..	2	..	..	3	1	..	..	3	3	..	6	..	..	..	2	4	..	..	..	..	1	1	..	..	..	1	..	1	1	1	..

OFFICIAL ENGLISH TRANSLATION.

Diseases and Causes of Death.

Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**299**	**40**	**7**	**6**	**1**	**3**	**6**	**2**	**9**	**14**	**14**	**13**	**29**	**41**	**56**	**58**		**156**	**143**		**224**	**40**	**34**	**1**	**103**	**132**	**64**			**25**	**21**	**21**	**32**	**29**	**29**	**20**	**24**	**27**	**21**	**22**	**28**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	36	3	3	1	1	..	3	1	2	5	3	3	4	3	3	1	..	19	17	..	27	4	5	..	17	14	5	..	..	1	1	2	6	3	5	3	5	1	3	2	4
1A. Typhoid fever	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..
8. Scarlet fever	3	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	3	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
9. Whooping cough	4	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	1	..	..	1	..	1	..	..	1	..	..	..
11B. Influenza, without pneumonic complications specified	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	1	..	1	..	..	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..
21. Erysipelas	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	16	..	..	..	..	..	1	..	..	5	3	2	2	1	2	..	..	7	9	..	9	3	4	..	4	7	5	..	..	..	..	2	4	2	2	2	1	1	..	1	1
33. Tuberculosis of the intestines and peritoneum	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
35. Tuberculosis of the joints	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Total deaths from tuberculosis	19	..	1	..	..	..	1	1	1	5	3	2	2	1	2	..	..	7	12	..	12	3	4	..	7	7	5	..	..	..	..	2	5	2	2	2	2	1	1	1
40. Gonococcal infection (ophthalmia excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	35	..	..	..	..	..	1	..	..	..	..	2	8	9	9	6	..	14	21	..	27	2	5	1	3	23	10	..	..	1	2	1	2	4	3	1	4	7	2	5	3
43. Malignant tumor of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
44. Malignant tumor, stomach and liver	6	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	..	4	2	..	5	..	1	..	..	3	1	..	..	1	..	..	..	..	2	1	..	..	1	1	..
45. Malignant tumors, peritoneum, intestines and rectum	5	..	..	..	..	..	..	..	..	..	..	..	1	2	2	..	..	2	3	..	4	..	1	..	..	4	1	..	..	..	1	..	..	1	..	..	1	..	..	..	1
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	1	1	..	..	..	2	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
47. Malignant tumors, breast	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..
48. Malignant tumors, skin	3	..	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	1	2	..	1	1	1	..	..	1	2	..	..	..	..	..	..	..	..	..	1	1	1	..	..

WATERLOO—Continued

Number of Columns.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	10	41
49. Malignant tumors of other or unspecified organs	5						1						1	3				3	2		4			1	2	3								1				3		1	
Total deaths from cancer	25						1						7	8	4	5		12	13		19	2	3	1	2	18	5			1	1	1		3	2	1	2	7	2	2	3
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	2														1	1			2		2					2													2	
57. Diabetes	5											2	1		2			1	4		5				1		4			1		2			1			1	
58A. Pernicious anaemia	3													1	2			1	2		1		2			2	1						1		1					
III.—Diseases of the Nervous System.																																									
Group Total	38	2	1	2					1		1	1	8	5	9	8		14	24		28	5	5		13	17	8			5	1	4	5	3	2	4	5	3	1	2	3
71A. Meningitis	2	1													1			1	1		1		1		1	1					1						1			
73. Other diseases of the spinal cord	5			1								1	2		1				5		4		1		2	1	2					2		1	1				1
74A. Cerebral haemorrhage, apoplexy	21												4	4	7	6		9	12		13	5	3		3	14	4			3		3	3	1		3	4	2	1		1
75B. Other forms of paralysis	4												1	1		2		2	2		4				2		2				1			1	1				1	
77. Other forms of mental alienation	1												1						1		1					1				1										
80. Infantile convulsions (under 5 years of age)	3	1	1	1														2	1		3				3					1				1					1	
81. Chorea	1								1										1		1				1															1
82B. Neuritis	1										1								1		1				1										1					
IV.—Diseases of the Circulatory System.																																								
Group Total	51	1								2	1	4	4	11	17	11		30	21		34	11	6		7	28	16			4	6	3	7	10	7	2	1	1	4	2	4
88. Acute endocarditis and myocarditis	3									1	1				1			3			2	1			1	2			1				1	1						
89. Angina pectoris	2												2	1				2			2					2								1					1	
90. Other diseases of the heart	28	1								1		8	2	6	10	5		14	14		21	5	2		4	14	10			3	5	1	3	5	5			1	3		2
91B. Arteriosclerosis	18											1	1	4	6	6		11	7		9	5	4		2	10	6				1	2	3	4	1	2	1		1	1	2
V.—Diseases of the Respiratory System.																																								
Group Total	29	6	1			1			1		1	1		5	7	6		18	11		20	5	4		12	12	5			6	2	2	3	5	1	1		1		2	6
99A. Bronchitis, acute	1															1			1					1																1
99C. Bronchitis, not otherwise defined, 5 years of age	2		1			1												2			2				2					1						1				
99D. Bronchitis, not otherwise defined, over 5 years of age	4														1	3		1	3		1	3				2	2													2
100A. Broncho-pneumonia	5	2							1						2			2	3		5				4	1				1		1		1					2	
101A. Pneumonia, lobar	3										1	1		1				3			2	1				3								2						1
101B. Pneumonia, not otherwise defined	12	4												4	3	1		10	2		9	1	2		5	5	2			5		2	3		1			1		
105. Asthma	2														1	1			2		1		1			1	1			1									1	

| | | |

WATERLOO—Concluded

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	16	16																12	4		16				16					1	1	2		1	1	1	1	4	2	1
160B. Congenital debility, icterus and scleroma	5	5																3	2		5				5												1		1	
161A. Premature birth	9	9																7	2		9				9					1	1				1	1	4		1
161B. Injury at birth	1	1																1			1				1														1	
162. Other diseases peculiar to early infancy	1	1																1			1				1							1								
164. XIII.—Old Age.																																								
Group Total	19														3	16		8	11		11	2	6		2	8	9			3	5		1	1	2	1		1	2	2	1
XIV.—External Causes.																																								
Group Total	15	1				1			3	4	1				3	2		11	4		11	4			7	7	1				1	1			2	3	2		1	2	3
170. Suicide by firearms	1										1								1		1					1											1			
179. Burns (conflagration excepted)	1						1											1			1				1							1								
182. Accidental drowning	1									1								1			1				1										1					
185. Accidental injury by fall	1															1			1			1				1				1										
187. Accidental injury by machinery	1														1				1		1					1														1
Other forms of crushing (vehicles, railways, landslides, etc.)	2								1	1								2			1	1			1	1									1				1	
188C. Automobile accidents	1									1								1				1				1													1	
188F. Other accidental injuries by crushing, etc.	1								1									1			1				1										1					
194. Excessive heat	1	1																1			1				1											1				
196. Electricity (lightning excepted)	1									1								1			1					1														1
201C. Fracture (cause not specified)	4									1					2	1		3	1		3	1			1	2	1								1	1		1		1
202. Other external violence	2								2									2			1	1			2										1				1	
XV.—Ill-Defined Diseases.																																								
Group Total	4										1			1	2			3	1		2	1	1		1	3				1		1	1		1					
204. Sudden death	2														2			1	1		1		1			2						1	1						
205A. Cause of death unstated or ill-defined	2										1			1				2			1	1			1	1				1				1					

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	441	113	8	5	2	5	12	5	6	28	39	21	30	43	73	51	..	235	206	..	309	56	62	14	221	138	80	..	2	40	47	43	39	32	34	33	35	42	30 *	35	31
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	48	8	3	2	1	1	4	3	1	4	8	3	4	2	3	1	..	25	23	..	32	5	11	..	27	17	4	..	..	3	5	3	4	2	2	3	3	5	5	8	5
1A. Typhoid fever	5	..	..	..	1	..	..	..	..	1	1	1	1	..	..	..	..	4	1	..	4	..	1	..	1	3	1	..	..	1	..	..	..	..	..	..	..	1	..	2	1
8. Scarlet fever	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
9. Whooping cough	4	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4	..	..	..	4	..	..	..	..	..	..	..	..	1	..	..	..	1	2	..	..
10. Diphtheria	7	..	1	..	..	1	4	1	..	..	..	..	..	..	..	..	..	3	4	..	6	..	1	..	7	..	..	..	..	1	..	..	1	..	..	..	..	2	1	2
11A. Influenza, with pneumonic complications specified	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..
11B. Influenza, without pneumonic complications specified	7	3	..	1	..	..	..	..	..	..	1	..	2	..	..	..	..	5	2	..	6	..	1	..	4	3	..	..	..	1	1	2	..	..	..	..	1	..	..	2
16C. Dysentery, due to other causes or of unspecified origin	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
31. Tuberculosis of the respiratory system	15	1	..	1	..	..	..	1	1	1	5	1	1	1	2	..	..	8	7	..	9	1	5	..	8	5	2	..	..	1	1	1	1	1	2	3	1	1	2	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	17	1	..	1	..	..	..	1	1	1	5	2	1	2	2	..	..	8	9	..	9	2	6	..	8	7	2	..	..	1	2	1	1	1	2	2	3	1	1	2	..
38D. Syphilis, hereditary	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
II.—General Diseases.																																								
Group Total	46	..	1	..	..	..	2	..	..	2	5	3	8	12	10	3	..	18	28	..	29	6	9	2	11	25	10	..	..	3	8	1	5	4	5	4	5	4	2	4	1
44. Malignant tumors, stomach and liver	10	..	..	..	..	..	..	..	..	..	..	2	2	3	3	..	..	5	5	..	3	3	4	..	2	7	1	..	..	1	2	..	2	2	..	2	..	..	..	1	..
45. Malignant tumors, peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	2	1	..	1	..	2	..	..	3	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	..	1	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..
47. Malignant tumors, breast	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	1	1	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..

WELLAND—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
49. Malignant tumors of other or unspecified organs	9	.								.	1	.	2	2	3	1		3	6	.	7	1	.	1	1	4	4	.	.	2	.	1	1	2	1	1	1	.	.	.
Total deaths from cancer	26	.								.	3	2	5	6	8	2		10	16	.	13	5	7	1	3	16	7	.	.	1	6	.	4	3	3	3	3	1	.	2	.
52. Chronic rheumatism, osteo-arthritis gout	3	.	.	.	.	.	.	.	.	1	.	.	.	1	1	.	.	2	1	.	2	1	.	.	1	1	1	.	.	.	1	.	.	.	.	.	.	2	.	.	.
57. Diabetes	7	.	.	.	.	.	1	.	.	1	.	1	.	3	.	1	.	2	5	.	7	.	.	.	1	4	2	.	.	1	1	1	.	1	.	2	1	.	.	.
58A. Pernicious anaemia	3	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.	.	1	2	.	2	.	1	.	2	1	.	.	.	.	.	.	1	1	.	.	.	.	1	.	.
60A. Exophthalmic goitre	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
65B. Lymphadenoma (Hodgkin's disease)	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.
66. Alcoholism (acute or chronic)	2	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	2	.	.	2	.	.	.	1	1	.	.	.	1	.	.	.	.	.	.	.	.	1	.
67B. Chronic poisoning by other mineral substances	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.
69. Other general diseases	2	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	2	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.
III.—Diseases of the Nervous System.																																								
Group Total	33	3	.	.	.	.	2	.	.	.	3	3	5	3	8	6	.	20	13	.	20	4	6	3	12	13	7	.	1	5	4	3	1	2	1	4	5	4	1	2	1
71A. Meningitis	2	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	2	.	.	2	.	.	.	1	1	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.
73. Other diseases of the spinal cord	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
74A. Cerebral haemorrhage, apoplexy	17	.	.	.	.	.	.	.	.	.	1	2	3	2	5	4	.	12	5	.	8	3	4	2	3	9	4	.	1	3	2	1	.	1	1	3	4	1	1	.	.
75A. Hemiplegia	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.
75B. Other forms of paralysis	3	.	.	.	.	.	.	.	.	.	.	1	1	.	.	1	.	1	2	.	2	.	1	.	.	.	3	.	.	.	.	.	.	.	1	.	.	1	.	1	.
78. Epilepsy	4	.	.	.	.	.	.	.	.	.	2	.	.	.	2	.	.	1	3	.	2	1	.	1	3	.	1	.	.	1	.	1	.	.	.	.	1	.	1	.	.
80. Infantile convulsions (under 5 years of age)	3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	3	.	.	.	3	.	.	.	.	1	.	.	1	.	.	1	.	.	.	.	.
84. Other diseases of the nervous system	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
86A. Diseases of the ears	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
IV.—Diseases of the Circulatory System.																																								
Group Total	81	1	.	.	.	.	.	.	.	1	4	.	9	15	35	16	.	35	40	.	56	13	9	3	17	29	34	.	1	7	12	11	7	9	9	3	4	4	3	7	5
87. Pericarditis	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
88. Acute endocarditis and myocarditis	7	1	.	.	.	.	.	.	.	1	2	.	2	.	1	.	.	3	4	.	5	1	1	.	3	3	1	.	.	1	1	2	.	.	1	.	.	.	2	.	.
90. Other diseases of the heart	40	.	.	.	.	.	.	.	.	.	1	.	3	7	18	11	.	14	26	.	24	9	7	.	6	16	18	.	.	2	7	5	3	4	4	1	2	3	2	3	4
91B. Arteriosclerosis	31	.	.	.	.	.	.	.	.	.	.	.	4	7	15	5	.	15	16	.	24	3	1	3	8	8	14	.	1	4	4	3	4	4	4	2	1	1	1	2	1
92. Atheroma and other diseases of the arteries	2	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	2	.	.	2	.	.	.	.	1	1	.	.	.	.	.	1	.	1	.	.	.	.	.	.
V.—Diseases of the Respiratory System.																																								
Group Total	50	15	3	1	.	.	2	1	2	1	4	2	1	4	5	9	.	28	2	.	37	8	4	1	29	13	8	.	.	7	7	7	6	3	1	1	.	4	4	5	5
99A. Bronchitis, acute	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	.

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WELLAND—Continued

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	2															2		1	1			1		1		1	1									1				1	
151. Gangrene	2															2		1	1			1		1		1	1									1				1	
XI.—Malformations.																																									
Group Total	5	5																2	3		4		1		5					1	2		1			1				
159A. Congenital malformations not otherwise specified (still-births excepted)	2	2																	2		1		1		2					1						1				
159C. Congenital malformations of the heart	3	3																2	1		3				3						2		1							
XII.—Diseases of Early Infancy.																																									
Group Total	48	48																30	18		48				48					3	3	4	4	6	5	4	3	6	3	1	6
160B. Congenital debility, icterus and scleroma	19	19																12	7		19				19					1		2			2		3	6		1	4
161A. Premature birth	22	22																15	7		22				22					2	2	2	4	5	2	1			2		2
161B. Injury at birth	5	5																3	2		5				5									1	1	2			1		
162. Other diseases peculiar to early infancy	2	2																	2		2				2						1					1					
164. XIII.—Old Age.																																									
Group Total	12													1	2	9		5	7		7	3	1	1		1	11			2		1	1	1	1	2		2		1	1
XIV.—External Causes.																																									
Group Total	49	2	1	2		4		1	3	14	9	7	2	2	1	1		38	11		22	12	15		32	16	1			3	3	4	3	3	7	10	3	3	4	4	2
168. Suicide by strangulation	2										1			1				2			1	1			1	1				1			1								
169. Suicide by drowning	1													1					1				1			1													1		
171. Suicide by cutting or piercing instruments	1											1						1			1					1													1		
175. Poisoning by food	1	1																	1		1				1											1					
177. Other acute accidental poisonings	1											1						1					1									1									
179. Burns (conflagration excepted)	3		1			1				1								1	2		3				2	1													1	1	
180. Accidental mechanical suffocation	1	1																	1		1				1																
182. Accidental drowning	12				1			1	2	5	1	2						11	1		3	4	5		10	2								2	2	4	2	1			2

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition				Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**426**	**56**	**3**	**4**	**1**	**2**	**5**	**17**	**7**	**20**	**14**	**18**	**42**	**53**	**97**	**84**	**3**	**223**	**203**		**327**	**80**	**12**	**7**	**162**	**158**	**105**		**1**	**34**	**45**	**37**	**36**	**32**	**41**	**30**	**31**	**39**	**33**	**31**
I.—Endemic, Epidemic and Infectious Diseases.																																							
Group Total	40	5	1	1		1	2	5	1	3	4	4	6	2	2	2	1	22	18		35	1	2	2	27	11	2			3	8	6		6	2	1	3	2	2	3	4
8. Scarlet fever	1					1													1		1				1					1										
9. Whooping cough	3	1	1	1														1	2		3				3							2		1						
10. Diphtheria	6	1					2	2									1	4	2		6				6						1			1		1		1	2	
11b. Influenza without pneumonic complications specified	7	3										1			2	1		4	3		5	1	1		3	3	1			1	2			1				1		2
21. Erysipelas	1										1							1	1		1				1					1										
23. Encephalitis lethargica	1											1						1			1					1					1									
25. Purulent infection, septicaemia	1															1			1		1					1											1			
31. Tuberculosis of the respiratory system	13							1	1	1	2	2	5	1				10	3		11			2	10	3					2	3		2	1	1	1	1		1	1
32. Tuberculosis of the meninges and central nervous system generally	1											1							1		1					1								1						
34. Tuberculosis of the vertebral column	2									1			1						2		1		1		1	1									1					1
35. Tuberculosis of the joints	1													1					1		1						1													
37a. Disseminated tuberculosis—acute	3							2			1							2	1		3				2	1				3										
Total deaths from tuberculosis	20							3	1	2	3	3	6	2				12	8		17		1	2	13	6	1			5	3		4	1	1	2	1		1	2
II.—General Diseases.																																							
Group Total	50				1			1		3	2	4	14	9	11	5		30	20		43	6	1		7	30	13			5	4	3	5	5	4	2	2	8	6	3	3
44. Malignant tumors of the stomach and liver	8											1	1	1	3	2		6	2		5	3				6	2			1			2		1		2	1	1	
45. Malignant tumors of the peritoneum, intestines and rectum	4												2		1	1		3	1		3		1			1	3				1	1		1				1		
46. Malignant tumors of the female genital organs	1												1						1		1					1				1										
47. Malignant tumors of the breast	4										1		1	2					4		3	1				1	3			1							2	1		
48. Malignant tumors of the skin	1														1			1			1					1											1			
49. Malignant tumors of other or unspecified organs	8												4	2		2		5	3		8				1	6	1				1			1	2			1		1

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WELLINGTON—Continued

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
105. Asthma	1															1			1			1				1							1								
107c. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	1												1					1			1				1															1
VI.—Diseases of the Digestive System.																																								
Group Total	36	9		1				4	2	2		1	4	6	5	2		12	24		34	2			20	11	5			3	2	4	2	4	5	1	2	5	4	1	3
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1								1									1			1				1								1							
111A. Ulcer of the stomach	2													1		1			2		2				1	1												1		1
111B. Ulcer of the duodenum	1												1					1			1					1												1		
112. Other diseases of the stomach (cancer excepted)	3													1	2			1	2		3				1		2			1		1				1				
113. Diarrhoea and enteritis (under 2 years)	7	7																2	5		7				7						1	1	1	1	1		2			
114. Diarrhoea and enteritis (over 2 years)	4			1						1					2			1	3		3	1			2	2				1		1					1	1		
117. Appendicitis and typhlitis	6							3	1	1			1					2	4		5	1			5	1								2	2			1	1		
118A. Hernia	1	1																	1		1				1											1				
118B. Intestinal obstruction	3	1											1	1				2	1		3				1	2				1							1			1
119B. Other diseases of the intestine	6											1	1	2	1	1		3	3		6					3	3				1	1		1	1	1				1
124. Other diseases of the liver	1													1					1		1					1												1		
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1							1											1		1				1												1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																								
Group Total	19	1						1		1	1	2	1	5	4			10	9		15	3	1		6	7	6			1	2	2	3	2	1	1	1	4	1	
128. Acute nephritis	2							1								1		1	1		1	1			1		1											1	1	
129. Chronic nephritis (Bright's disease)	9										1			5	2	1		5	4		7	1	1		2	3	4						1	1	1	1	1		3	1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	3	1								1		1						1	2		3				2	1				1	1	1								
135. Diseases of the prostate	3												1		1	1		3			2	1			1	2					1		2							
137. Cysts and other benign tumors of the ovary	1															1			1		1						1					1								
139. Benign tumors of the uterus	1											1							1		1					1							1							
VIII.—The Puerperal State.																																								
Group Total	3									1	1	1							3		2	1				3					1		1					1		
144. Puerperal haemorrhage	1										1								1			1				1												1		

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WELLINGTON—Concluded

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
185. Accidental injury by fall	3												1		1	1		2	1		3					1	2					1				1	1				
187. Accidental injury by machinery	1														1			1			1					1										1					
Other forms of crushing (vehicles, railways, landslides, etc.	4									1	1	1			1			3	1		3			1	2	2					1		1			1		1		
188A. Railroad accidents	2											1			1			2			2					2					1		1							
188C. Automobile accidents	2									1	1							1	1		1			1	2															
189. Injury by animals (poisoning excepted)	1									1								1			1				1					1										
201C. Fracture (cause not specified)	7							1					2	1	1	2		5	2		4	2	1		2	3	2				1	2	1		1	1		1		
202. Other external violence	5							1					2		2			3	2		4		1		1	3	1				1	1	1	1		1				
XV.—Ill-defined Diseases.																																								
Group Total	5								1			1		2	1			3	2		4	1			2	2	1					1			2			1	1	
204. Sudden death	2													1	1			2			1	1			1		1								1			1		
205A. Cause of death unstated or ill-defined	3								1			1		1				1	2		3				1	2						1			1			1		

CAUSES OF DEATH IN THE COUNTY OF WENTHWORTH, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	442	67	6	1	2	1	9	8	8	31	29	36	42	61	80	59	2	236	206		322	85	28	7	187	169	86			56	59	51	39	36	36	22	30	35	23	31	24
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	81	5	3		2	1	2	2	3	19	15	9	6	4	6	3	1	46	35		51	16	12	2	45	31	5			9	19	13	6	6	9	4	4	4	1	3	3
1A. Typhoid fever	1										1							1				1				1					1									
6. Smallpox	2											1	1					2			2				1	1				1				1						
9. Whooping cough	5	3	1		1													3	2		5				5					1	2	2								
10. Diphtheria	4					1	1	2										2	2		3	1			4							1						1	1	1
11B. Influenza without pneumonic complications specified	2													1	1			1	1		1	1				1	1			1			1							
15. Cholera nostras	1														1			1			1					1						1								
16C. Dysentery due to other causes or of unspecified origin	5	1	1		1		1							1				1	4		4		1		4	1				1				3					
25. Purulent infection, septicaemia	2													1	1			1	1			1		1		1	1						1						1
31. Tuberculosis of the respiratory system	48		1						3	18	12	6	3	3	1		1	28	20		28	9	10	1	28	19	1			7	14	9	2	4	6	2	2		1	1
33. Tuberculosis of the intestines and peritoneum	2										1	1						1	1		2				1	1								1					1	
36B. Tuberculosis of the bones (vertebral column excepted)	1													1				1			1					1										1				
36E. Tuberculosis of the organs other than the above	2														2			2			1	1				2					1		1						
37A. Disseminated tuberculosis—acute	3	1								1	1							1	2		2		1		2	1						2			1				
Total deaths from tuberculosis	56	1	1						3	19	14	7	3	4	3		1	33	23		34	10	11	1	31	24	1			7	15	9	5	5	6	2	3	1		2	1
38E. Syphilis, stage not indicated	3											1	2					2	1		1	2				2	1								1	1	1				
II.—General Diseases.																																								
Group Total	36	2								1	1	3	9	10	6	4		17	19		30	5	1		5	22	9			1	2	4	6	2	3	2	4	6	1	3	2
43. Malignant tumors of the buccal cavity	1													1				1			1					1													1	
44. Malignant tumor of the stomach and liver														5				4			5				1	3	4				1		1	2	1	2			1	

WENTWORTH—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	31
45. Malignant tumors of the peritoneum, intestines and rectum	4													2	1	1		2	2		4					2	2						1	1						2
46. Malignant tumors of the female genital organs	1											1							1				1			1												1		
47. Malignant tumors of the breast	1												1						1		1					1				1										
49. Malignant tumors of other or unspecified organs	7										1	1	1	2	1	1		3	4		6	1			1	4	2					2	2				1	2		
Total deaths from cancer	22										1	2	3	10	4	2		10	12		20	1	1		2	12	8			1	1	2	3	2	2	1	3	2	1	2	2
52. Chronic rheumatism, osteo-arthritis, gout	1															1		1			1					1							1							
57. Diabetes	5									1			3		1			3	2		3	2				5							2				1	2		
58A. Pernicious anaemia	3											1	1			1		1	2		2	1				2	1										1		1	
58B. Other anaemias and chlorosis	1												1						1		1					1							1							
62. Diseases of the thymus	1	1																1			1				1												1			
65A. Leukaemia	1														1				1			1				1									1					
69. Other general diseases	2	1											1					1	1		2				2					1										
III.—Diseases of the Nervous System.																																									
Group Total	50	2						1		3	1	12	7	10	9	5		23	27		34	10	4	2	16	23	11			4	7	8	4	6	4	1	3	2	7	3	1
72. Tabes dorsalis (locomotor ataxy)	1														1				1		1					1													1	
73. Other diseases of the spinal cord	3									1			1		1			3			2	1			1	2						1		1			1		
74A. Cerebral haemorrhage, apoplexy	17												2	7	5	3		10	7		11	3	3		3	7	7			1	3	3		3	2			3	1	1
75A. Hemiplegia	1															1			1			1					1											1		
75B. Other forms of paralysis	2											1				1		1	1		2					1	1			1			1							
76. General paralysis of the insane	3										1	1	1					1	2		2	1				3								1		1	1			
77. Other forms of mental alienation	16											10	2	2	2			2	14		11	3		2	6	8	2				4	4	1	1	1		1		3	1	
78. Epilepsy	3							1		1			1					2	1		2		1		3					2										
80. Infantile convulsions (under 5 years of age)	2	2																2			2				2						1						1		
83. Cerebral softening	1													1				1				1				1										1				
84. Other diseases of the nervous system	1									1								1			1				1							1								
IV.—Diseases of the Circulatory System.																																									
Group Total	80	1						1	1	1	3	2	8	16	26	21		41	39		50	24	4	2	10	40	30			15	8	7	2	8	6	4	6	7	4	7	6
88. Acute endocarditis and myocarditis	3									1			2					2	1		3				1	2				1		1							1	
89. Angina pectoris	4											1	2		1			2	2		4				2	2								1		1				1
90. Other diseases of the heart	44							1			3	1	2	9	16	12		20	24		26	16	1	1	4	22	18			8	3	4	1	5	2	2	2	4	4	4	5
91B. Arteriosclerosis	26												2	7	9	8		17	9		16	7	3		1	13	12			5	5	2	1	3	3	2	2	1		2	

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WENTWORTH—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII.—The Puerperal State.																																									
Group Total	1										1								1		1					1							1									
149. Childbirth (without other explanation)	1										1								1		1					1							1									
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	1														1				1		1					1																1
151. Gangrene	1														1				1		1					1																1
X.—Diseases of the Bones and Organs of Locomotion																																									
Group Total	2						1							1					2		2					1		1					1					1				
156. Diseases of the bones (tuberculosis and rickets excepted)	1						1												1		1					1							1									
157. Diseases of the joints (tuberculosis and rheumatism excepted)	1													1					1		1							1									1					
XI.—Malformations.																																									
Group Total	10	9	1															4	6		10					10					1		2	1	1	1		1	1		1	1
159A. Congenital malformations not otherwise specified (still-births excepted)	5	5																1	4		5					5					1		1		1	1					1
159B. Hydrocephalus	2	1	1																2		2					2								1						1		
159C. Congenital malformations of the heart	3	3																3			3					3							1				1	1				
XII.—Diseases of Early Infancy.																																									
Group Total	24	24																14	10		24					24					2	2		3	1	3	1	2	3	3	2	2
160B. Congenital debility, icterus and scleroma	9	9																5	4		9					9						1		1		1			2	1	1	2
161A. Premature birth	12	12																6	6		12					12					2		3		2	1	2	1	1			
161B. Injury at birth	2	2																2			2					2														1	1	
162. Other diseases peculiar to early infancy	1	1																1			1					1						1										

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**1178**	**257**	**29**	**11**	**7**	**6**	**32**	**21**	**30**	**96**	**84**	**84**	**98**	**125**	**180**	**118**		**619**	**559**		**818**	**277**	**54**	**29**	**557**	**421**	**197**	**1**	**2**	**119**	**109**	**112**	**102**	**106**	**81**	**95**	**102**	**97**	**101**	**73**	**81**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	280	22	12	8	5	3	14	6	15	63	48	36	21	11	11	5		142	138	..	187	58	29	6	150	115	15	..	..	34	29	25	24	23	14	24	31	19	18	18	21
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
6. Smallpox	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
8. Scarlet fever	2	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..
9. Whooping cough	20	10	6	2	1	..	1	..	..	..	..	..	..	7	13	..	..	20	..	..	20	..	..	..	20	..	..	..	..	1	3	5	5	3	1	..	1	..	..	..	1
10. Diphtheria	27	..	2	3	2	2	11	6	1	..	..	..	..	10	17	..	..	25	2	..	..	..	..	..	27	..	..	..	..	5	3	3	2	2	1	3	3	..	2	2	1
11A. Influenza with pneumonic complications specified	7	2	..	..	..	..	..	..	..	1	1	..	..	1	1	1	..	4	3	..	5	2	..	..	3	4	..	..	..	..	3	1	2	..	..	..	..	..	1	..
11B. Influenza without pneumonic complications specified	12	1	..	1	..	..	1	..	..	1	..	..	..	1	4	3	..	4	8	..	12	..	..	..	4	4	4	..	..	3	2	2	1	1	..	..	1	..	2	..	..
15. Cholera nostras	2	..	1	..	..	..	1	..	..	..	..	..	..	..	2	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	4	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	3	1	..	3	1	..	..	2	1	1	..	..	..	..	..	..	..	..	1	2	..	1	..
21. Erysipelas	4	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	3	..	2	2	..	..	1	2	1	..	..	1	..	1	1	..	1	..	..	..	..	..	..
23. Encephalitis lethargica	3	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	1	2	..	3	..	..	..	1	2	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..
25. Purulent infection, septicaemia	5	3	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	3	..	4	1	..	..	3	2	..	..	..	2	..	..	..	1	..	..	1	1	..	..	..
31. Tuberculosis of the respiratory system	181	1	1	..	1	1	..	..	13	56	47	31	20	7	3	..	..	104	77	..	98	49	28	6	75	97	9	..	..	21	17	11	12	14	9	17	23	13	14	12	18
32. Tuberculosis of the meninges and central nervous system generally	4	1	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	4	..	..	4	..	..	..	3	1	..	..	..	1	..	..	..	1	1	1	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	4	..	..	..	1	..	..	..	..	2	..	..	..	1	..	..	..	1	4	..	3	..	1	..	3	1	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
35. Tuberculosis of the joints	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Total deaths from tuberculosis	192	2	3	..	2	1	..	..	14	60	47	32	20	8	3	..	..	108	84	..	107	50	29	6	84	99	9	..	..	22	18	11	12	16	11	20	25	13	14	12	18
II.—General Diseases.																																								
Group Total	115	2	..	..	..	..	5	4	3	3	5	16	16	34	20	7	..	51	64	..	64	42	6	3	32	60	23	..	..	9	6	10	9	10	8	16	8	12	12	9	6
43. Malignant tumors of the buccal cavity	4	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	3	1	..	3	..	1	..	1	1	2	..	..	..	1	..	1	..	..	..	..	1	..	1	..

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YORK—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System.																																									
Group Total	149	1	1				2	2	2	4	2	11	20	26	53	25		78	71		85	54	4	6	29	76	43		1	16	14	14	17	18	11	8	12	1	10	14	14
88. Acute endocarditis and myocarditis	18							2	2	1	1	5	6	1				6	12		12	5		1	6	12				3	1	3	2			1	2		1	3	2
89. Angina pectoris	3													2		1		2	1		3					2	1							1	1	1					
90. Other diseases of the heart	77		1				2			2	1	4	11	16	31	9		38	39		37	33	3	4	19	35	22		1	7	5	7	8	10	7	5	6	1	7	6	8
91A. Aneurism	1											1						1				1				1				1											
91B. Arteriosclerosis	45												2	7	22	14		30	15		30	14	1		3	23	19			6	5	4	6	7	3	2	4		1	4	3
93. Embolism and thrombosis (not cerebral)	1									1									1		1					1												1		
94. Diseases of the veins (varicos, haemorrhoid, phlebitis, etc.)	2											1	1						2		2					2													1	1
95. Diseases of the lymphatic system (lymphangitis, etc.)	1	1																1						1	1					1										
96. Haemorrhage without determined cause; other diseases of the circulatory system	1															1			1			1					1			1										
V.—Diseases of the Respiratory System.																																								
Group Total	140	43	9	1			1	1		3	7	8	10	14	28	15		78	62		94	39	5	2	71	41	28			19	23	21	21	10	8	2	4	5	13	6	8
98. Diseases of the larynx	2	2																	2		2				2										1		1				
99A. Bronchitis, acute	5	5												3	2			5			5				5					1	1	1	2							
99B. Bronchitis, chronic	2													1		1		2			2				1		1							1	1					
99C. Bronchitis, not otherwise defined, under 5 years of age	7	6	1															4	3		7				7					3	1	2	1							
99D. Bronchitis, not otherwise defined, over 5 years of age	8													1	4	3		4	4		3	5			1	4	3			1	1	1	2	1	1		1			
100A. Broncho-pneumonia	38	15	4							1			3	3	9	3		25	13		26	8	2	2	23	8	7			6	9	6	4	2	1	1	2	2	1	2	2
100B. Capillary bronchitis	1		1															1			1				1					1										
101A. Pneumonia, lobar	18	1	1	1				1			2	3	4	2	2	1		10	8		10	7	1		6	9	3			2		4	3	1		1			2	5
101B. Pneumonia, not otherwise defined	48	14	2					1		2	4	3	2	6	9	5		23	25		32	14	2		23	15	10			8	7	7	6	3	4		1	2	7	2	1
102. Pleurisy	3										1		1	1				1	2		3				1		2				1		1					1		
103. Congestion and haemorrhagic infarct of the lung	3															2	1	3			1	2			1	1	1							1				2		
105. Asthma	4											1				2	1	1	3		1	3				3	1				1	1	1					1		
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	1											1						1			1					1												1		
VI.—Diseases of the Digestive System.																																								
Group Total	91	44	3	1		1	3	2	1	2	2	2	11	7	7	5		48	43		80	10	1		60	19	12			6	4	6	4	2	5	11	9	30	7	4	3
108A. Diseases of the teeth and gums	2	1										1						1	1		2				2													1	1	
109. Diseases of the pharynx and tonsils (including adenoid vegetation	3	1					1			1								2	1		3				2	1						1					1			1

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YORK—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
X.—Diseases of the Bones and Organs of Locomotion.																																									
Group Total	1															1			1			1					1											1				
157. Diseases of joints (tuberculosis and rheumatism excepted)	1															1			1			1					1											1				
XI.—Malformations.																																									
Group Total	22	22																13	9		21			1	22					2	1		2	2	4	1	3	1	5		1
159A. Congenital malformations not otherwise specified (still-births excepted)	11	11																5	6		10			1	11					1	1		1		1	1	3	1	1		1
159B. Hydrocephalus	2	2																	2		2				2					1									1		
159C. Congenital malformations of the heart	9	9																8	1		9				9								1	2	3				3		
XII.—Diseases of Early Infancy.																																									
Group Total	103	103																67	36		102			1	103					7	7	15	6	14	4	7	9	13	7	6	8
160B. Congenital debility, icterus and scleroma	22	22																13	9		21			1	22					2	3	2	1	1		1	3	5	3		1
161A. Premature birth	68	68																45	23		68				68					4	4	11	3	11	4	3	6	8	4	5	5
161B. Injury at birth	4	4																2	2		4				4					1		1									1
162. Other diseases peculiar to early infancy	8	8																6	2		8				8							1	2	2		2					1
163. Lack of care	1	1																1			1				1															1		
164. XIII.—Old Age.																																									
Group Total	47													2	13	32		18	29		31	14	1	1	4	12	30		1	11	8	1		3	4	3	1	1	6	3	6
XIV.—External Causes.																																									
Group Total	63	4	1		1	2	4	4	7	9	6	4	6	3	4	8		48	15		46	12	3	2	39	17	6	1		4	4	4	5	4	7	11	6	6	5	6	1
165. Suicide by solid or liquid poisons	1										1							1					1			1										1				
167. Suicide by poisonous gas	1											1						1				1				1								1						
168. Suicide by hanging or strangulation	1							1										1			1				1								1							
169. Suicide by drowning	1														1			1			1					1										1				
170. Suicide by firearms	2									1		1						2			1		1		1	1						1			1					
171. Suicide by cutting or piercing instruments	1												1					1			1				1					1										
175. Poisoning by food	1							1										1			1				1											1				
177. Other acute accidental poisonings	2										2							2			1			1	1	1							2							
78. Conflagration	1		1															1			1				1											1				

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	206	37	5	1	3	1	3	2	6	14	11	16	22	26	34	24	1	98	108		168	33	4	1	84	88	33		1	19	18	34	15	14	8	16	19	14	16	16	17
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	30	3	2	..	3	..	2	1	4	3	4	1	3	4	..	..	..	11	19	..	25	4	1	..	19	6	5	..	..	2	..	10	2	1	..	3	3	2	3	..	4
1A. Typhoid fever	4	1	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	2	2	..	4	..	..	..	1	3	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1
8. Scarlet fever	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
10. Diphtheria	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
11A. Influenza, with pneumonic complications specified	5	..	..	..	..	..	..	..	1	..	1	..	1	2	..	..	..	1	4	..	5	..	..	..	2	..	3	..	..	..	..	5	..	..	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	3	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1	2	..	3	..	..	..	2	..	1	..	..	..	..	2	..	..	..	..	..	..	1	..	..
16C. Dysentery, due to other causes or of unspecified origin	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	10	..	1	..	..	..	..	1	2	3	2	..	1	..	..	..	..	3	7	..	7	3	..	..	7	3	..	..	..	..	..	1	2	1	..	2	..	2	1	..	1
32. Tuberculosis, meninges and central nervous system generally	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
37A. Disseminated tuberculosis—acute	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Total deaths from Tuberculosis	13	1	1	..	..	..	1	1	2	3	2	..	1	1	..	..	..	4	9	..	9	3	1	..	9	3	1	..	..	1	..	2	2	1	..	2	..	2	2	..	1
41. Gonorrhoeal or purulent opthalmia	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	30	1	..	..	..	..	..	..	..	2	..	4	10	4	8	1	..	9	21	..	26	3	1	..	8	21	1	..	..	4	3	3	1	2	3	4	2	..	4	3	1
44. Malignant tumors, stomach and liver	7	..	..	..	..	..	..	..	..	1	..	..	2	..	4	..	..	4	3	..	5	2	..	..	1	6	..	..	..	1	..	1	..	..	1	..	1	..	1	2	..
45. Malignant tumors, peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..
46. Malignant tumors, female genital organs	3	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	3	..	3	..	..	..	1	2	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..

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BELLEVILLE—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1										1								1		1					1											1				
112. Other diseases of the stomach (cancer excepted)	4			1								1			2			2	2		3	1			1	2	1				2					1	1			
113. Diarrhoea and enteritis (under 2 years)	8	7	1															5	3		8				8									2		1	2		2	1
114. Diarrhoea and enteritis (over 2 years)	3					1									1	1		1	2		2	1			1	1	1								1		1		1	
117. Appendicitis and typhlitis	1									1								1			1				1					1										
118B. Intestinal obstruction	1											1							1			1				1				1										
122B. Cirrhosis, not returned as alcoholic	1													1				1				1			1															1
124. Other diseases of the liver	3													2	1			1	2		3				1	2						1						1		1
VII. Non-Venereal Diseases of the Genito-Urinary System and its Adnexa																																								
Group Total	14									2	2	1		3	4	2		9	5		8	5	1		1	10	3			4	1	2			2			1	3	1
128. Acute nephritis	3									1		1			1			1	2		1	2				3				1					1			1	
129. Chronic nephritis, (Bright's disease)	8										2			3	2	1		6	2		5	3			1	4	3			2	1	1			1		1	1	1
133. Diseases of the bladder	1														1			1			1					1												1		
135. Diseases of the prostate	1																1	1			1					1				1										
141. Other diseases of the female genital organs	1									1									1				1			1						1								
VIII.—The Puerperal State.																																								
Group Total	2										1	1							2		2					2				1					1					
145C. Other accidents of labor	1										1								1		1					1										1				
148. Puerperal albuminuria and convulsions	1											1							1		1				1					1									
XII.—Diseases of Early Infancy.																																								
Group Total	21	21																12	9		21				21					2	2	3	1		1	1	4	3	2	2	
160B. Congenital debility, icterus and scleroma	9	9																3	6		9				9					1		1			1		1	3	1	1	
161A. Premature birth	10	10																8	2		10				10					1	2	1	1			1	2		1	1	
162. Other diseases peculiar to early infancy	2	2																1	1		2				2							1					1				
164. XIII.—Old Age.																																								
Group Total	12														4	8		2	10		9	3				4	8			1	2	3		1		1	1	1		2
XIV.—External Causes.																																								
Group Total	11						1		1	3		1			2	3		9	2		7	4			5	3	3				1	1	3	1	1	2		1		1
179. Burns (conflagration excepted)	1															1		1			1						1						1							
185. Accidental injury by fall	1									1								1			1				1								1							

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Group Total	338	53	3	2	2	2	9	5	8	17	7	40	37	58	67	28		176	162		240	78	13	7	121	154	63			29	28	33	33	29	19	29	34	21	21	26	36
I. Endemic, Epidemic and Infectious Diseases.																																									
Group Total	38	5	1	..	1	..	7	1	4	5	1	8	..	3	2	..	..	20	18	..	27	8	2	1	23	13	2	..	..	..	1	4	4	1	5	2	6	2	7	3	3
1A. Typhoid fever	3	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	3	..	..	2	..	..	1	2	1	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..
6. Smallpox	2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..
9. Whooping cough	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	8	..	1	..	..	..	7	..	..	..	..	..	..	..	..	..	..	2	6	..	8	..	..	..	8	..	..	..	..	..	..	1	1	..	..	1	1	1	1	..	..
11A. Influenza, with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	1
11B. Influenza, without pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
3 Tuberculosis of the respiratory system	11	..	..	..	..	..	..	3	3	..	..	4	..	1	..	..	..	8	3	..	6	3	2	..	4	7	..	..	..	..	..	..	..	1	2	1	5	..	2	..	..
33. Tuberculosis of the intestines and peritoneum	3	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	1	2	..	2	1	..	..	1	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
36B. Tuberculosis of the bones (vertebral column excepted)	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2	..	1	1	..	..	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..
37B. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Total deaths from tuberculosis	18	..	..	..	..	..	..	3	5	1	7	..	2	..	..	..	..	11	7	..	10	6	2	..	6	11	1	..	..	..	1	..	2	1	3	1	5	..	3	..	2
II.—General Diseases.																																								
Group Total	39	..	..	..	..	..	1	2	1	2	..	4	9	12	7	1	..	13	26	..	21	14	3	1	8	19	12	..	..	6	2	1	2	8	2	5	4	1	3	1	4
44. Malignant tumors, stomach and liver	10	..	..	..	..	..	..	..	..	..	..	..	3	5	1	1	..	5	5	..	6	3	1	..	1	6	3	..	..	1	2	..	..	1	..	2	..	..	2	1	1
45. Malignant tumors, peritoneum, intestines and rectum	4	..	..	..	..	..	..	..	..	..	..	1	2	1	..	..	..	..	4	..	1	2	..	1	..	2	2	..	..	1	..	..	..	..	1	..	2	..	..	..	..
46. Malignant tumors, female genital organs	5	..	..	..	..	..	..	..	..	..	..	1	3	1	..	..	..	..	5	..	..	4	1	..	2	2	1	..	..	2	..	1	..	2	..	..	..	..	..	..	..
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	6	..	..	..	..	..	..	1	..	1	..	1	1	2	..	..	..	3	3	..	5	1	..	..	1	5	..	..	..	..	..	..	..	1	..	1	2	..	..	..	2

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	22	3	2	..	..	1	1	1	1	1	..	6	1	2	2	1	..	10	12	..	17	2	2	1	10	10	2	..	..	..	2	2	2	1	3	2	2	1	1	3	3
108A. Diseases of the teeth and gums	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..
113. Diarrhoea and enteritis (under 2 years)	4	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2
114. Diarrhoea and enteritis (over 2 years)	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..
117. Appendicitis and typhlitis	5	..	..	..	..	..	1	1	1	..	..	2	..	..	..	..	..	1	4	..	3	1	..	1	2	3	..	..	..	..	..	2	1	..	..	1	..	..	1	..
118B. Intestinal obstruction	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	..	1	..	1	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1
122B. Cirrhosis, not returned as alcoholic	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..
123. Biliary calculi	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
124. Other diseases of the liver	3	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	2	1	..	2	..	1	..	..	3	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	26	1	..	..	..	..	..	..	1	1	..	1	3	10	9	..	..	21	5	..	20	6	..	..	5	18	3	..	..	2	5	..	4	..	1	3	2	1	3	4	1
128. Acute nephritis	3	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	3	..	..	2	1	..	..	2	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..
129. Chronic nephritis (Bright's disease)	11	..	..	..	..	..	..	..	1	1	..	1	2	4	2	..	..	7	4	..	9	2	..	..	3	7	1	..	..	1	2	..	3	..	..	1	2	1	1	..	..
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
133. Diseases of the bladder	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
134A. Stricture of the urethra	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
135. Diseases of the prostate	8	..	..	..	..	..	..	..	..	..	..	..	..	3	5	..	..	8	..	..	7	1	..	..	..	7	1	..	..	1	1	..	1	..	..	1	..	..	1	3	..
139. Benign tumors of the uterus	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
VIII.—The Puerperal State.																																								
Group Total	3	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	3	..	3	..	..	..	..	3	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..
146. Puerperal sepsis	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..
148. Puerperal albuminuria and convulsions	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	..	2	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
151. Gangrene	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
153. Phlegmon, acute abscess	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**231**	**38**	**8**	**4**	**5**	**1**	**5**	**7**	**6**	**13**	**12**	**11**	**25**	**26**	**41**	**29**		**113**	**118**		**174**	**40**	**16**	**1**	**96**	**80**	**55**			**23**	**18**	**26**	**16**	**19**	**16**	**19**	**16**	**10**	**25**	**25**	**18**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	36	5	2	2	..	..	1	1	2	5	6	4	4	3	..	1	..	12	24	..	30	3	3	..	22	12	2	..	..	5	4	3	4	4	4	2	..	1	3	2	4
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
8. Scarlet fever	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	6	3	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6	..	..	..	6	..	..	..	..	2	2	1	1	..	..	..	..	..	..	..	..
10. Diphtheria	2	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	1	..	1	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
11A. Influenza with pneumonic complications specified	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
25. Purulent infection, septicaemia	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2	..	1	1	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1
31. Tuberculosis of the respiratory system	17	..	..	1	..	..	..	..	2	4	4	2	..	3	..	..	..	4	13	..	14	1	2	..	8	8	1	..	..	4	2	..	2	3	2	1	..	..	2	1	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
36D. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Total deaths from tuberculosis	20	..	..	1	..	..	..	..	2	4	6	3	1	3	..	..	..	5	15	..	17	1	2	..	9	10	1	..	..	4	2	..	2	3	3	1	..	2	..	2
40. Gonococcal infection (opthalmia excepted)	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
II.—General Diseases.																																								
Group Total	22	1	1	..	..	..	..	..	..	1	..	1	4	8	2	4	..	12	10	..	16	5	1	..	5	8	9	..	..	1	2	2	1	2	1	4	1	..	1	5	2
44. Malignant tumors of the stomach and liver	5	..	..	..	..	..	..	..	..	..	..	..	1	3	1	..	..	5	..	..	4	1	..	..	1	2	2	..	..	..	1	..	..	2	..	..	1	..	..	1	..
45. Malignant tumors of the peritoneum, intestines and rectum	4	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	2	2	..	3	1	..	..	..	2	2	..	..	..	..	1	..	..	..	2	..	..	1	..	..
46. Malignant tumors of the female genital organs	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	..	1	1	..	..	..	..	2	..	..	..	..	1	..	..	..	1	..	..	..	..	..
47. Malignant tumors of the breast	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2	..	1	1	..	..	..	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	29	8	3			1		3	2	2	2	1	1		3	3		14	15		22	4	3		18	7	4			1	4	2		1	1	4	9		4	1	2
108B. Other diseases of the buccal cavity and its annexa	1														1			1					1			1					1										
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2		1					1										2			2				2									1		1				
111A. Ulcer of the stomach	1												1					1				1				1										1				
112. Other diseases of the stomach (cancer excepted)	3														1	2		1	2		1	2					3					1				1			1
113. Diarrhoea and enteritis (under 2 years)	10	8	2															6	4		10				10										1	2	5		1	1	
114. Diarrhoea and enteritis (over 2 years)	2						1									1			2		1	1			1		1								2				
117. Appendicitis and typhlitis	5							2	2	1								3	2		3		2		5					2							3		
118B. Intestinal obstruction	1													1					1		1					1													1
119B. Other diseases of the intestine	2										1				1				2		2					2			1					1					
123. Biliary calculi	1											1							1		1					1				1									
126. Peritonitis of unstated origin	1									1									1		1					1				1									
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	12									2			2	1	5	2		8	4		11	1			1	7	4			2		3		2		1		1	2		1
129. Chronic nephritis (Bright's disease)	4												1	1	2			3	1		4				1	2	1					1		1			1			1
132. Calculi of the urinary passages	1														1			1			1					1						1								
133. Diseases of the bladder	3														2	1		3			3	1				1	2							1		1		1		
135. Diseases of the prostate	1															1		1			1						1					1							
138. Salpingitis and pelvic abscess	2									2									2		2					2			1								1		
140B. Non-puerperal uterine haemorrhage	1												1						1		1					1			1										
VIII.—The Puerperal State.																																								
Group Total	5									3	1	1							5		3	1	1			5				1		1		1	1		1		
143A. Abortion	1									1									1		1					1							1						
143C. Other accidents of pregnancy	3												1	1	1				3		2		1			3				1				1			1		
144. Puerperal haemorrhage	1									1									1			1				1						1							
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2												2					1	1		2					2				1							1			
153. Phlegmon, acute abscess	2												2					1	1		2					2				1							1			

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	255	84	13	5	1	1	16	10	10	13	25	26	19	13	11	8		142	113		158	37	31	29	161	73	20		1	17	28	25	23	17	23	18	27	18	16	20	23
I. Endemic, Epidemic and Infectious Diseases.																																								
Group Total	39	6	1	2	1	1	5	5	5	5	3	1	2	1	1			19	20		25	3	8	3	29	9	1			5	3	4	4	2	3	3	5	4	1	1	4
1A. Typhoid fever	2							1				1						2			1		1		1		1							1			1				
7. Measles	2			1		1													2		2				2					1						1				
8. Scarlet fever	4						2	2											4		3	1			4					3			1							
9. Whooping cough	2	1					1											1	1		2				2									1						1	
10. Diptheria	2			1				1										1	1		2				2								1			1				
11B Influenza, without pneumonia complications specified	3	1			1						1								3		3				2	1						1		1		1				
25. Purulent infection, septicaemia	4	1	1							2								2	2		2		1	1	3	1						1				1	1			1
29. Tetanus	1									1									1				1			1												1		
31. Tuberculosis of the respiratory system	12						1		5	1	1		2	1	1			7	5		5	1	5	1	7	5				1	1		1		2	1	2	1	1		2
32. Tuberculosis, meninges and central nervous system generally	2						1				1							2			1	1			1	1						2								
33. Tuberculosis of the intestines and peritoneum	3	1						1		1								3			2			1	3					1		2								
Total deaths from tuberculosis	17	1					2	1	5	2	2		2	1	1			12	5		8	2	5	2	11	6				1	2	2	3		2	1	2	1	1		2
38B. Syphilis, hereditary	1	1																1			1				1						1									
42. Other endemic, epidemic or infectious diseases	1	1																	1		1				1										1					
II.—General Diseases.																																								
Group Total	23	1							1	1	5	7	4	1	2	1		12	11		8	6	6	3	4	17	2				6	1	4			2	3	2	2		3
43. Malignant tumors of the buccal cavity	1															1		1				1					1													1
44. Malignant tumors, stomach and liver	3										1	1	1					3			1		2			3				2						1				
45. Malignant tumors, peritoneum, intestines and rectum	5											2	1		2			3	2		3		2			5						2			1	1			1
46. Malignant tumors, female genital organs	4											2	1	1					4		2	2				3	1			2		1							1

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FORT WILLIAM—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	37	18	5					1		1	1	6	1	3		1		16	21		28	4	2	3	26	9	2			2	2	5		2	2	2	9	5	2	4	2
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	3	1	1					1										2	1		2			1	3								1			1	1			
122. Other diseases of the stomach (cancer excepted)	1										1								1		1					1														
113. Diarrhoea and enteritis (under 2 years)	20	16	4															10	10		19			1	20														1		
117. Appendicitis and typhlitis	1													1					1				1		1					1	5			1	2	7	2	1	1	
118B. Intestinal obstruction	2	1										1						2			1	1			1	1											1			
119B. Other diseases of the intestine	1												1						1			1			1				1							1			
123. Biliary calculi	3											2		1				1	2		2	1				1	2						1						2	1
124. Other diseases of the liver	4									1		1		1		1		4			3		1			4										1		1		
126. Peritonitis of unstated origin	1											1						1				1				1			1										
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	1											1						1						1	1					1										
VII.—Non-Venereal Diseases of the Genito-Urinary System and Annexa.																																								
Group Total	11			1						1	1	1	1	2	2	2		6	5		3	5	1	2	3	5	3			1	1		1			1	1	1	1	4
128. Acute nephritis	2			1						1								1	1				1	1	2														2
129. Chronic nephritis (Bright's disease)	7											1	1	2	2	1		4	3		2	4		1		4	3			1	1		1				1	1	1	1
135. Diseases of the prostate	1															1		1			1				1											1				
138. Salpingitis and pelvic abscess	1										1								1			1				1														1
VIII.—The Puerperal State.																																								
Group Total	5								1	3	1								5				4	1		5				1		1	1	1				1	
145A. Caesarean section	1									1									1					1		1							1						
146. Puerperal sepsis	4								1	2	1								4				4			4				1		1		1				1	
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	1														1			1				1				1												1		
151. Gangrene	1														1			1				1				1												1		
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1								1									1			1				1												1			
156. Diseases of the bones (tuberculosis and rickets excepted)	1							1										1			1				1												1			

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total		28			1		2	3	3	7	7	20	12	18	39	18		92	66		99	47	7	5	51	71	36			12	15	16	13	16	13	12	6	13	14	14	14
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	17	1						2	1	4	1	2	1	2	2	1		8	9		12	5			6	9	2			5		2		2	2	1			1	4
5A. Malarial fever	1												1						1			1				1							1							
10. Diphtheria	1							1											1		1				1														1	
11A. Influenza, with pneumonic complications specified	1													1				1			1					1					1								
11B. Influenza, without pneumonic complications specified	2											2							2		2					1	1						1						1
16C. Dysentery, due to other causes or of unspecified origin	1													1				1				1			1														1
25. Purulent infection, septicaemia	2	1														1		1	1		2				1	1			1					1						
31. Tuberculosis of the respiratory system	8							1	1	4	1	1						5	3		5	3			4	4			1		4		1					1	1
34. Tuberculosis of the vertebral column	1											1							1		1					1								1					
Total deaths from tuberculosis	9							1	1	4	1	2						5	4		6	3			4	5				1		4		1	1				1	1
II.—General Diseases.																																								
Group Total	18								1			5	4	1	6	1		9	9		9	8		1	2	13	3			2	2	2	2	2	1	2			3	1	1
44. Malignant tumors, stomach and liver	7											2	2	1	1	1		5	2		2	4		1	1	4	2				2	1		1		1			2		
45. Malignant tumors, peritoneum, intestines and rectum	1														1			1				1				1							1							
46. Malignant tumors, female genital organs	2											1	1						2		2					2			1			1							
49. Malignant tumors of other or unspecified organs	1											1							1		1					1			1										
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1														1			1			1						1				1								
51. Rheumatic fever	1								1									1			1				1												1		

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GALT—Continued

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Adnexa.																																									
Group Total	5										1			1	2	1		3	2		1	3	1			4	1						1	1		1				1	1
129. Chronic nephritis (Bright's disease)	2														1	1		2			1	1				1	1						1							1
131. Other diseases of the kidneys and their adnexa (diseases of the kidneys in pregnancy excluded)	1													1					1				1			1													1	
133. Diseases of the bladder	1														1			1				1				1								1						
138. Salpingitis and pelvic abscess	1										1								1			1				1									1					
VIII.—The Puerperal State.																																									
Group Total	1											1							1		1						1								1						
144. Puerperal haemorrhage	1											1							1		1						1								1						
XI.—Malformations.																																									
Group Total	5	5																3	2		5				5						1	1		1			1			1
159A. Congenital malformations not otherwise specified (still-births excepted)	3	3																1	2		3				3					1			1						1
159C. Congenital malformations of the heart	2	2																2			2				2						1					1			
XII.—Diseases of Early Infancy.																																									
Group Total	8	8																5	3		8				8						1	1			3	2	1			
160B. Congenital debility, icterus and scleroma	5	5																2	3		5				5						1	1			1	2				
161A. Premature birth	3	3																3			3				3										2		1			
XIII.—Old Age.																																									
164. Senility total	8														3	5		4	4		3	4	1		1	1	6			1	2				1		1	2	1		

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**316**	**46**	**5**		**3**		**12**	**1**	**10**	**16**	**20**	**26**	**33**	**47**	**56**	**41**		**168**	**148**		**226**	**66**	**19**	**5**	**134**	**110**	**72**			**20**	**34**	**21**	**23**	**35**	**17**	**29**	**34**	**31**	**24**	**26**	**22**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	37	3	1				4		6	4	5	5	6		2	1		19	18		29	4	4		22	12	3			1	8	4	2	6	2	1	5	1	2	2	3
1A. Typhoid fever	1								1										1		1				1												1				
10. Diphtheria	3						3											2	1			1	2		3													1	2
11A. Influenza with pneumonic complications specified	1												1					1			1						1					1								
11B. Influenza without pneumonic complications specified	4										2	1			1			1	3		4				2	1	1			4										
21. Erysipelas	4		1									1	1			1		2	2		4				2	2					1		1	1					1
25. Purulent infection, septicaemia	4						1			2		1						1	3		3		1		1	3						1	1		1		1			
29. Tetanus	1								1									1			1				1				1											
31. Tuberculosis of the respiratory system	14								3	2	2	2	4		1			7	7		11	3			7	6	1				3	3		4	1		3				
32. Tuberculosis of the meninges and central nervous system generally	2	1							1									2			1		1		2										1				1	
33. Tuberculosis of the intestines and peritoneum	1										1								1		1				1												1			
Total deaths from tuberculosis	17	1							4	2	3	2	4		1			9	8		13	3	1		10	6	1				3	3		4	1	1	3		1	1	
38D. Syphilis, hereditary	2	2																2			2				2						1						1			
II.—General Diseases.																																								
Group Total	37						2		1		1	4	4	13	12			11	26		26	10		1	10	17	10			3	3	1	3	5	1	3	5	5	1	5	2
44. Malignant tumors of the stomach and liver	12												2	4	6			4	8		5	6		1	1	5	6			1	2			2		1	1	1	1	2
45. Malignant tumors of the peritoneum, intestines and rectum	3													2	1			1	2		2	1			1	2									1	2				
47. Malignant tumors of the breast	5											3		2					5		4	1			2	2	1		1				1			2			1	
49. Malignant tumors of other or unspecified organs	4						1							1	2			3	1		3	1			1	2	1					1	1				2			

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GUELPH—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
103. Congestion and haemorrhagic infarct of the lung	2														1	1			2		1	1					2				1				1					
105. Asthma	1														1				1		1					1				1										
VI.—Diseases of the Digestive System.																																								
Group Total	27	6	1		1					3	2	3	4	4	1	2		16	11		20	5	2		12	10	5			2	2	4	2	1	1	4	4	4	2		1
111A. Ulcer of the stomach	1												1						1		1					1												1		
113. Diarrhoea and enteritis (under 2 years)	6	6																4	2		5		1		6					1						2	3			
114. Diarrhoea and enteritis (over 2 years)	3				1					1		1						2	1		3				3									2			1			
117. Appendicitis and typhlitis	6									1	1	2	2					6			3	2	1			6			1		1	1		1	1	1				
118A. Hernia	1															1			1		1									1										
118B. Intestinal obstruction	3		1											1		1		3			3				2		1				1								1
119A. Diseases of the anus and stercoral fistulae	1										1								1			1				1										1			
119B. Other diseases of the intestine	2													2					2		1	1				1	1						1			1			
123. Biliary calculi	1												1						1		1					1						1							
124. Other diseases of the liver	2													1	1			1	1		1	1					2			1	1								
126. Peritonitis of unstated origin	1									1									1		1				1				1											
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Adnexa.																																								
Group Total	16	1										2		5	5	3		11	5		9	6	1		4	5	7					2	2	1		2	2	3		1	3
128. Acute nephritis	3	1										1		1				3			3				3							1	1				1			
129. Chronic nephritis (Bright's disease)	6											1		2	3			3	3		2	4			1	3	2					1		1			1	2			1
131. Other diseases of the kidneys and their adnexa (diseases of the kidneys in pregnancy excluded)	3													1	2			2	1		2	1				1	2								2					1
132. Calculi of the urinary passages	1													1				1					1				1										1			
133. Diseases of the bladder	3															3		2	1		2	1				1	2						1					1	1
Group Total	3									1	2								3		2		1			3								1		1		1		
143C. Other accidents of pregnancy	1									1									1		1					1												1		
148. Puerperal albuminuria and convulsions	2										2								2		1		1			2								1			1			
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2														1	1			2		1	1				1		1							1			1			
153. Phlegmon, acute abscess	1															1			1		1					1												1		
155. Other diseases of the skin and its adnexa	1														1				1			1					1								1					

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**1459**	**307**	**50**	**11**	**12**	**1**	**40**	**24**	**31**	**88**	**110**	**136**	**160**	**199**	**164**	**113**	**1**	**773**	**686**		**937**	**390**	**112**	**20**	**664**	**531**	**264**			**123**	**115**	**145**	**121**	**89**	**111**	**130**	**114**	**122**	**137**	**120**	**132**
I.—Endemic, Epidemic and Infectious Diseases																																								
Group Total	213	20	15	6	3	5	20	16	10	29	31	22	11	17	6	2	..	110	103	...	153	39	16	5	132	65	16	...	...	14	22	22	18	15	12	16	17	18	25	17	17
1A. Typhoid fever	5	..	..	..	..	..	..	1	1	2	..	..	..	1	..	..	..	..	3	...	1	4	..	..	4	..	1	..	..	1	..	..	1	..	..	1	..	1	1	..	..
7. Measles	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	...	2	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
8. Scarlet fever	3	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	3	...	3	..	..	..	2	1	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..
9. Whooping cough	16	9	1	2	2	..	1	..	..	..	1	..	..	..	..	..	..	4	12	...	15	1	..	..	15	1	..	..	..	3	3	3	3	2	1	..	1	..	..	..	..
10. Diphtheria	42	1	7	3	1	4	15	10	..	1	..	..	..	..	..	..	..	24	18	...	38	3	..	1	42	..	..	..	..	3	3	5	3	1	1	1	4	3	10	7	1
11A. Influenza with pneumonic complications specified	7	3	1	..	..	..	..	..	..	..	1	..	..	1	1	..	..	3	4	...	5	2	..	..	4	3	..	..	..	..	5	..	2	..	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	5	..	..	..	..	..	1	..	..	..	..	2	..	1	..	1	..	4	1	...	2	3	..	..	1	3	1	..	..	..	1	1	..	..	2	..	..	..	..	1	..
16C. Dysentery due to other causes or of unspecified origin	5	2	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	3	...	5	..	..	..	4	..	1	..	..	..	..	..	..	..	..	2	2	1	..	..
21. Erysipelas	4	1	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	2	...	4	..	..	..	2	2	..	..	..	1	1	..	..	..	..	..	2	..	..	..	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	11	..	..	..	..	1	1	..	..	2	3	1	2	1	..	..	..	6	5	...	9	1	1	..	3	7	1	..	..	..	..	2	..	1	1	2	1	1	3	..	..
29. Tetanus	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
31. Tuberculosis of the respiratory system	88	2	..	1	..	..	..	1	6	22	20	16	8	7	4	1	..	49	39	...	53	22	11	2	37	42	9	..	..	5	7	7	7	6	5	9	8	6	7	7	14
32. Tuberculosis of the meninges and central nervous system generally	8	2	1	..	..	..	..	1	2	..	1	..	..	..	1	..	..	3	5	...	6	..	1	1	8	..	..	..	..	1	..	2	1	..	..	2	..	2	..	..	..
33. Tuberculosis of the intestines and peritoneum	3	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	3	..	...	2	..	1	..	2	1	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..
34. Tuberculosis of the vertebral column	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2	...	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
36D. Tuberculosis of the genito-urinary system	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	1	...	1	..	1	..	..	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
37A. Disseminated tuberculosis—acute	4	..	1	..	..	..	..	..	2	..	..	..	..	1	..	..	..	2	2	...	2	1	..	1	3	..	1	..	..	..	..	..	..	..	..	..	1	..	1	2
Total deaths from tuberculosis	107	4	2	1	..	..	1	4	8	24	23	18	8	9	4	1	..	58	49	...	66	23	14	4	52	45	10	...	...	6	8	11	8	7	6	11	8	10	8	8	16
38E. Syphilis, stage not indicated	4	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	..	2	2	...	1	2	1	...	...	2	2	...	...	..	1	..	..	1	1	1	..	..	..	..	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System.																																									
Group Total	210		1			1			4	7	7	18	35	48	50	39		99	111		104	83	20	3	29	103	78			10	20	20	17	14	18	10	17	19	17	24	24
88. Acute endocarditis and myocarditis	26								2	3	3	5	11	1	1			11	15		12	9	4	1	5	18	3			1	1	3	1	1	3	2	4	2		4	4
89. Angina pectoris	6											2	2	1	1			2	4		3	1	2			4	2						1		1		2		1	1	
90. Other diseases of the heart	111								2	2	4	5	15	31	32	20		50	61		56	42	12	1	10	52	49			6	13	9	5	9	9	6	4	8	15	13	14
91A. Aneurism	2												1		1			2			2					1	1			1						1					
91B. Arteriosclerosis	57											5	6	12	15	19		30	27		28	27	1	1	9	27	21			2	5	7	9	4	4	2	6	5	1	6	6
93. Embolism and thrombosis (not cerebral)	1													1					1			1					1									1					
94. Diseases of the veins (varicos, haemorrhoids, phlebitis, etc.)	5									2		1		2				2	3		2	2	1		3	1	1				1	1	1					2			
95. Diseases of the lymphatic system (lymphangitis, etc.)	1		1															1			1				1												1			
96. Haemorrhage without determined cause; other diseases of the circulatory system	1						1											1			1				1												1			
V.—Diseases of the Respiratory System.																																									
Group Total	223	53	15	4	1	2	7	1		9	17	24	17	26	25	22		131	92		145	61	14	3	107	72	44			37	27	36	23	10	14	16	6	10	9	9	26
98. Diseases of the larynx	1			1															1		1				1					1										
99A. Bronchitis, acute	5	1											1		2	1		2	3		3	2			1	2	2			1		3								1
99B. Bronchitis, chronic	2											1		1				1	1			2				1	1			1								1			
99C. Bronchitis not otherwise defined under 5 years of age	7	4	3															4	3		7				7					3		1				1			1	1
99D. Bronchitis not otherwise defined over 5 years of age	8									1			1		2	4		1	7		2	5	1			2	6				1	2		2				1		2
100A. Broncho-pneumonia	57	27	5	1			2			1	4	1	3	3	6	4		36	21		44	10	3		40	9	8			8	8	13	8	2	2	3	3		1	2	7
100B. Capillary bronchitis	1	1																1			1				1								1							
101A. Pneumonia, lobar	38	4	1				1			2	5	12	5	4	1	3		18	20		25	11	1	1	14	20	4			5	6	6	5	3	3	1		1	1		7
101B. Pneumonia not otherwise defined	83	16	5	2		2	4			4	6	7	5	17	8	7		59	24		54	22	7		36	31	16			17	12	10	7	2	6	7	2	4	6	3	7
102. Pleurisy	8				1						2				3	2		4	4		2	4	2		2	3	3			1		1			1	1		1	1	1	1
103. Congestion and haemorrhagic infarct of the lung	1														1				1		1						1												1		
105. Asthma	6											1	2	1	1	1		2	4		2	3		1	2	2	2						1		1	1	1	1		1	
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	6		1					1		1		2			1			3	3		3	2		1	3	2	1						1	1	1	2		1			
VI.—Diseases of the Digestive System.																																								
Group Total	153	67	10		3		2	3	2	8	7	11	14	12	11	3		88	65		117	23	12	1	102	39	12			8	6	10	8	9	3	12	21	26	22	18	10
108A. Diseases of the teeth and gums	2	1											1					1	1		1	1			1	1								1					1		

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Number of Columns.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	12	4	..	..	..	..	..	..	..	..	..	1	..	2	4	1	..	9	3	..	6	4	2	..	4	3	5	..	..	..	3	3	2	..	2	1	..	..	..	1	..
151. Gangrene	6	..	..	..	..	..	..	..	..	..	..	1	..	2	2	1	..	4	2	..	2	3	1	..	..	3	3	..	..	..	2	1	2	..	..	..	..	..	..	1	..
152. Furuncle	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	1	1	..	..	1	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..
153. Phlegmon, acute abscess	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	..	1	..	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..
155. Other diseases of the skin and its annexa	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	4	1	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	2	2	..	4	..	..	..	3	1	..	..	..	1	..	..	..	..	..	..	..	2	..	..	1
156. Diseases of the bones (tuberculosis and rickets excepted)	3	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	2	..	3	..	..	..	2	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1
157. Diseases of joints (tuberculosis and rheumatism excepted)	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
XI.—Malformations.																																								
Group Total	21	19	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	11	10	..	21	..	..	..	21	..	..	..	..	3	2	2	..	1	2	4	1	3	1	1	1
159A. Congenital malformations not otherwise specified (still-births excepted)	11	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	4	..	11	..	..	..	11	..	..	..	..	..	..	2	..	1	..	4	..	3	..	1	..
159B. Hydrocephalus	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..
159C. Congenital malformations of the heart	8	7	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	5	..	8	..	..	..	8	..	..	..	..	2	1	..	..	..	2	..	1	..	1	..	1
XII.—Diseases of Early Infancy.																																								
Group Total	126	126	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	77	49	..	125	..	1	..	126	..	..	..	..	19	14	10	12	6	12	10	10	4	12	9	8
160B. Congenital debility, icterus and scleroma	44	44	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	16	..	43	..	1	..	44	..	..	..	..	5	5	4	4	2	6	4	2	2	6	1	3
161A. Premature birth	48	48	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	20	..	48	..	..	..	48	..	..	..	..	9	6	3	5	2	4	..	6	..	5	4	4
161B. Injury at birth	19	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	7	..	19	..	..	..	19	..	..	..	..	4	1	1	2	..	..	4	1	1	1	3	1
162. Other diseases peculiar to early infancy	15	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	6	..	15	..	..	..	15	..	..	..	..	1	2	2	1	2	2	2	1	1	..	1	..
164. XIII.—Old Age.																																								
Group Total	26	..	..	..	..	..	..	..	..	..	..	..	..	1	9	16	..	9	17	..	6	18	1	1	2	7	17	..	..	1	1	1	4	3	2	3	2	..	4	1	4

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**430**	**66**	**11**	**1**	**4**	**5**	**8**	**7**	**5**	**29**	**24**	**28**	**48**	**63**	**76**	**54**	**1**	**223**	**207**		**314**	**84**	**19**	**13**	**197**	**142**	**89**		**2**	**41**	**33**	**49**	**39**	**35**	**36**	**36**	**32**	**21**	**35**	**26**	**47**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	63	3	4	1	3	3	3	3	..	16	7	6	4	3	2	5	..	27	36	..	49	10	2	2	39	18	6	..	..	1	2	6	12	6	3	7	8	3	7	2	6
1A. Typhoid fever	3	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	1	2	..	1	2	..	..	..	2	1	..	..	1	..	..	..	..	..	..	..	1	1	..	..
8. Scarlet fever	4	..	..	..	2	..	1	..	..	1	..	..	..	..	..	..	..	1	3	..	3	..	1	..	3	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1
10. Diphtheria	6	..	..	..	3	2	1	..	..	..	..	..	..	..	..	..	..	2	4	..	6	..	..	..	6	..	..	..	..	..	..	..	1	..	2	..	1	..	..	1	1	..
11A. Influenza, with pneumonic complications specified	6	..	1	1	..	..	..	..	..	2	..	..	..	..	..	2	..	1	5	..	5	1	..	..	5	..	1	..	..	..	..	1	4	..	..	..	..	..	..	1	..
11B. Influenza, without pneumonic complications specified	3	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	1	2	..	2	..	1	..	2	1	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	8	2	2	..	..	..	..	1	..	..	..	..	..	..	1	2	..	4	4	..	7	1	..	..	6	..	2	..	..	..	..	..	..	..	..	1	3	1	3	..	..
23. Encephalitis lethargica	4	..	..	..	..	..	..	..	..	1	..	3	..	..	..	..	..	4	..	..	4	..	..	..	1	3	..	..	..	..	2	..	..	..	..	..	1	..	1	..	..
25. Purulent infection, septicaemia	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
29. Tetanus	2	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..
30. Mycoses	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	16	..	..	..	..	..	..	1	..	6	2	2	3	2	..	..	..	4	12	..	12	4	..	..	5	10	1	..	..	..	..	1	5	2	2	2	..	..	..	..	2
32. Tuberculosis, meninges and central nervous system generally	2	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
33. Tuberculosis of the intestines and peritoneum	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	1	..	1	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	22	..	..	..	1	..	..	1	..	8	5	2	3	2	..	..	..	8	14	..	15	6	..	1	10	10	2	..	..	..	..	2	6	2	3	2	3	..	1	..	3
38D. Syphilis, hereditary	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
38E. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
II.—General Diseases.																																								
Group Total	59	1	..	..	..	..	..	1	1	..	2	4	15	19	12	4	..	30	29	..	44	12	1	2	17	28	14	..	..	4	4	2	2	3	11	5	4	6	4	6	8
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	..	..	1	..	1	1	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
99A. Bronchitis, acute	2	1														1		1	1		2				1		1					2									
99B. Bronchitis, chronic	3														2		1		3		1	2			1	1	1			1		1		1						
99C. Bronchitis, not otherwise defined, under 5 years of age	2	1	1															1	1		2				2								1					1		
99D. Bronchitis, not otherwise defined, over 5 years of age	1											1						1			1					1				1									
100A. Broncho-pneumonia	18	8				1								1	6	2		10	8		13	4		1	11	2	5			1	1	5	6	1			1	1	1	1
101A. Pneumonia, lobar	2												1	1				1	1		1			1			2													2
101B. Pneumonia, not otherwise defined	30	1								3	2		5	7	6	6		11	19		22	6	2		10	9	11			7	5	5	1		1	1		3	3	4
102. Pleurisy	1						1											1				1																	
103. Congestion and haemorrhagic infarct of the lung	3	1												1		1		2	1		1		1	1	2		1			1	1									
105. Asthma	2													1	1			2			2				1	1							2							
VI.—Diseases of the Digestive System.																																								
Group Total	40	9	4			1	2		1	1	5	4	6	4	1	2		20	20		34	2	3	1	23	15	2			3	2	4	1	7	2	4	7	3	3	2	2
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2									1						1		1	1		1		1		1	1							1				1			
111A. Ulcer of the stomach	2										1	1						2			2				2								1	1						
111B. Ulcer of the duodenum	2												1	1				2			2				1	1						1						1		
112. Other diseases of the stomach (cancer excepted)	3	2													1			3			3				2	1							1		1		1			
113. Diarrhoea and enteritis (under 2 years)	10	6	4															5	5		10				10								1		1	5	1	2		
114. Diarrhoea and enteritis (over 2 years)	2					1										1			2		2				1		1								2				
117. Appendicitis and typhlitis	9						2				3	1	2	1				4	5		7		2		3	6				2	1		3		1			1	1
118B. Intestinal obstruction	3	1										1	1					1	2		2			1	2		1			1							1		1
119B. Other diseases of the intestine	1												1					1			1					1								1					
122B. Cirrhosis, not returned as alcoholic	1														1				1		1					1			1										
124. Other diseases of the liver	2											1			1				2		1	1				2					1	1							
126. Peritonitis of unstated origin	1								1										1		1				1						1								
127. Other diseases of the digestive system (cancer and tuberculosis excepted)	2										1		1					1	1		1	1				2				1				1					
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	19									1			4	2	9	3		10	9		14	5			5	8	5		1	1	2	1		3	4		1	2	1	1	3
129. Chronic nephritis (Bright's disease)	10												2	1	7			5	5		6	4			2	5	2		1		2	1		2	2			1			2
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1															1		1				1			1												1			
133. Diseases of the bladder	1															1		1			1						1													1
135. Diseases of the prostate	3														2	1		3			3					1	2			1				2						
137. Cysts and other benign tumors of the ovary	3									1			2						3		3				1	2							1				1	1	
139. Benign tumors of the uterus	1													1					1		1																1			

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KINGSTON—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
170. Suicide by firearms	1																																								
177. Other acute accidental poisonings	1			1																																					
178. Conflagration	1												1					1			1					1						1									
182. Accidental drowning	4				1		2					1						1			1																				
183. Accidental injury by firearms (war casualties excepted)	6										2	3			1			4			4	1		1	3	1			1	4	1				1	2		1		
194. Excessive heat	2						1				1							1	1		2				1	1														
201C. Fracture (cause not specified)	1															1		1			1	1					1									1				
202. Other external violence	4							1		1		1				3			4			2		1		1	3									1				
	2																	2			1				1	1												1		
XV.—Ill-Defined Diseases.																																								
Group Total	2	1											1						2		2				1	1									1			1		
204. Sudden death																																								
205A. Cause of death unstated or ill-defined	1												1						1		1				1										1			1		
	1	1																	1		1				1										1			1		

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	261	52	5	6	3	3	14	4	5	12	12	20	28	34	29	34		141	120		197	12	46	6	116	106	39			31	20	28	29	16	20	19		19	22	24	19
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	36	9	2	3	..	3	7	1	2	2	..	4	2	1	..	..	..	17	19	..	32	3	1	..	28	8	..	..	..	3	4	5	2	4	2	1	1	1	5	6	2
7. Measles	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..
8. Scarlet fever	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
9. Whooping cough	5	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5	..	..	..	5	..	..	..	..	1	..	1	..	3	..	..	..	..	..	..	..
10. Diphtheria	11	..	..	1	..	1	7	1	..	..	..	1	..	..	..	..	..	4	7	..	10	..	1	..	10	1	..	..	..	1	1	1	1	..	..	..	1	1	2	2	1
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	5	..	..	..	..	..	..	..	2	2	..	1	..	..	..	..	..	3	2	..	5	..	..	..	3	2	..	..	..	..	1	1	..	..	1	1	..	..	1	..	..
32. Tuberculosis meninges and central nervous system generally	3	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..
36d. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
37a. Disseminated tuberculosis—acute	2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	1	1	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..
Total deaths from tuberculosis	11	1	1	2	..	..	..	..	2	2	..	3	..	..	..	..	..	7	4	..	9	2	..	..	7	4	..	..	..	1	2	1	..	1	1	1	..	..	1	3	..
38c. Syphilis, tertiary	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
38d. Syphilis, hereditary	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..
38e. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	39	1	..	..	..	..	2	1	..	1	3	3	7	12	8	1	..	20	19	..	27	1	9	2	9	24	6	..	..	2	3	4	5	1	1	4	5	2	4	3	5
44. Malignant tumors, stomach and liver	9	..	..	..	..	..	..	..	..	..	..	1	2	2	3	1	..	5	4	..	7	1	1	..	..	7	2	..	..	1	..	2	..	..	..	2	1	..	1	1	1
45. Malignant tumors, peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	..	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
49. Malignant tumors of other or unspecified organs	8	..	..	..	..	..	..	..	..	..	2	..	..	3	3	..	..	6	2	..	5	..	2	1	1	7	..	..	..	..	3	1	..	..	..	1	..	..	1	1	1
Total deaths from cancer	21	..	..	..	..	..	..	..	..	..	2	2	3	6	7	1	..	11	10	..	15	1	4	1	1	17	3	..	..	1	3	3	..	..	..	4	3	..	2	2	3

KITCHENER—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
51. Rheumatic fever	3						2			1								2	1		2			1	3									1			1	1		
52. Chronic rheumatism, osteo-arthritis, gout	1							1										1			1				1															
53. Scurvy	1	1																1			1				1												1			
57. Diabetes	6												2	4				1	5		4		2			4	2					1	3				1		1
58A. Pernicious anaemia	3												1	2				2	1		1		2		1	2							1		1		1		
60A. Exophthalmic goitre	1														1				1		1						1								1				
64. Diseases of the spleen	1										1								1				1			1				1									
66. Alcoholism (acute or chronic)	2											1	1					2			2				2													1		
III.—Diseases of the Nervous System.																																							
Group Total	15	2	1				1		1	2			2	1		5		6	9		11		4		6	6	3			3	1			4		2		2			3
71A. Meningitis	1	1																1			1				1														1
71B. Cerebrospinal meningitis	1									1								1			1				1									1					
73. Other diseases of the spinal cord	1													1				1			1					1				1								
74A. Cerebral haemorrhage, apoplexy	5												1			4		2	3		2		3			3	2						2		1				2
74B. Cerebral thrombosis and embolism	1												1					1			1					1													
75B. Other forms of paralysis	1															1			1				1			1					1								
78. Epilepsy	1									1									1		1				1										1				
80. Infantile convulsions (under 5 years of age)	2	1	1																2		2				2									1			1		
81. Chorea	1							1											1		1					1				1									
86A. Diseases of the ears	1						1												1		1				1					1									
IV.—Diseases of the Circulatory System.																																							
Group Total	38				1		1			2	2	1	4	14	10	3		21	17		29	1	8		7	20	11			4	4	5	6		2	4	4	1	3	3	2
88. Acute endocarditis and myocarditis	2									1			1					2			1	1			1	1				1		1							
89. Angina pectoris	1									1									1		1				1										1				
90. Other diseases of the heart	21						1				2	1	1	9	6	1		11	10		17		4		3	11	7			2	3	2	3		1	2	4	1		2	1
91B. Arteriosclerosis	13												2	5	4	2		7	6		9		4		1	8	4			1	1	1	3		1	1			3	1	1
96. Haemorrhage without determined cause; other diseases of the circulatory system	1				1													1			1				1						1								
V.—Diseases of the Respiratory System.																																								
Group Total	32	10		1	2		1				1	4	6	2		5		17	15		25	1	6		18	11	3			7	1	6	4	2	2			4	2	4	
98. Diseases of the larynx	1				1													1			1				1						1				•				
99A. Bronchitis, acute	1															1		1					1		1	1					1				•				
100A. Broncho-pneumonia	8	3									1	1		1		2		3	5		7	1			3	3	2			4		2	1					1		
101A. Pneumonia, lobar	4	1		1								1	1					1	3		2		2		2	2				1			2					1	
101B. Pneumonia, not otherwise defined	14	6			1							2	3	1		1		7	7		12		2		9	5				2	1	1	3		1			2	1	3
102. Pleurisy	1												1					1			1						1								1				

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KITCHENER—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	22	22																14	8		22				22					2	2	3	6	1	3			1	2	1	1
160B. Congenital debility, icterus and scleroma	4	4																4			4				4						1		2					1		
161A. Premature birth	17	17																9	8		17				17					2	1	3	4	1	3			1	1	1
161B. Injury at birth	1	1																1			1				1													1			
164. XIII.—Old Age.																																								
Group Total	17														5	12		9	8		7	3	6	1	3	5	9			5	2	1			1	1	1	2	3		1
XIV.—External Causes.																																								
Group Total	11			1			1			1		3	2	1		2		7	4		9		1	1	3	6	2			1	1	1	1	2	2		2			1
165. Suicide by solid or liquid poisons	1												1					1			1					1								1						
168. Suicide by hanging or strangulation	1											1							1		1					1								1						
169. Suicide by drowning	1											1						1			1					1									1					
185. Accidental injury by fall	1															1		1						1			1				1									
Other forms of crushing (vehicles, railways, landslides, etc.)	1										1							1					1			1											1			
188A. Railroad accidents	1										1							1					1			1											1			
190. Electricity (lightning excepted)	1					1												1			1				1												1			
201C. Fracture (cause not specified)	4									1			1	1		1		2	2		4				2	2				1		1		1					1
202. Other external violence	1			1															1		1						1								1				1
XV.—Ill-Defined Diseases.																																								
Group Total	5	1											1	2		1		2	3		2		3		1	3	1									2	1		2	
205A. Cause of death unstated or ill-defined	5	1											1	2		1		2	3		2		3		1	3	1									2	1		2	

CAUSES OF DEATH IN THE CITY OF LONDON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	974	134	11	7	10	5	15	10	12	59	72	88	126	142	164	117	1	505	469		663	251	35	25	395	394	184	1		79	76	87	80	91	66	71	80	93	102	66	83
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	136	6	3	4	5	2	10	2	3	24	28	18	13	9	6	3		72	64		104	24	7	1	81	44	11			13	9	14	9	9	9	7	20	12	13	9	12
1A. Typhoid fever	20				1					2	5	6	5	1				12	8		16	4			14	4	2										13	4	2	1	
7. Measles	1								1										1		1				1										1					
8. Scarlet fever	4				1		3											2	2		4				4						1							2	1
9. Whooping cough	2	1		1														1	1		2				2						1						1			
10. Diphtheria	22	3	3	2	3	2	5	1	1		1		1					12	10		20	1	1		21	1				3		3	3		1		1	2	2	3	4
11A. Influenza with pneumonic complications specified	5									1		2		2				3	2		3	1	1			5				2		1		1				1		
11B. Influenza without pneumonic complications specified	9						1				1	2	1		3	1		5	4		6	2	1		2	5	2			1	1	1	2			1			3		
16C. Dysentery due to other causes or of unspecified origin	3											1				2		1	2		1	2				1	2										2	1			
21. Erysipelas	3	1											1	1				2	1		2	1			1	2				1				1		1					1
23. Encephalitis lethargica	4									1	1	1		1				2	2		4				2	1	1						1		1		1				
25. Purulent infection, septicaemia	4	1					1			1	1							2	2		4				2	2				1		2				1				
29. Tetanus	1										1							1			1					1														
31. Tuberculosis of the respiratory system	51			1					1	16	18	5	5	2	3			26	25		35	11	4	1	27	20	4			7	5	5	2	6	3	4	3	2	5	3	6
32. Tuberculosis of the meninges and central nervous system generally	1							1										1			1				1								1							
35. Tuberculosis of the joints	1									1								1			1				1												1			
36B. Tuberculosis of the bones (vertebral column excepted)	2									1				1				1	1		1	1			2					1		1								
36D. Tuberculosis of the genito-urinary system	1											1						1			1				1								1							
Total deaths from tuberculosis	56			1				1	1	18	18	6	5	3	3			29	27		39	12	4	1	32	20	4			7	6	5	3	7	4	4	3	3	5	3	6
38I. Syphilis, stage not indicated	2									1				1				1	1		1	1				2								2							
II.—General Diseases.																																								
Group Total	128	1					1		1	5	6	22	25	31	31	5		62	66		85	35	4	4	24	83	21			10	5	6	14	13	8	15	7	18	13	10	9
1B. Malignant tumors of the buccal cavity	1													1				1				1					1											1			

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
44. Malignant tumors of the stomach and liver	30									2		3	3	8	14			23	7		22	6	1	1	4	21	5				1	2	5	6	2	7		2	3	2	
45. Malignant tumors of the peritoneum, intestines and rectum	12											3	2	5	2			5	7		9	3			3	7	2			1	1	1		1	1	1	2	2	1	1	
46. Malignant tumors of the female genital organs	8											4	1	3					8		4	4			1	5	2			1			1			2		1	1	1
47. Malignant tumors the breast	8										2	2	2	2					8		3	5				7	1				1		1			1	3			2
48. Malignant tumors of the skin	1														1			1			1						1										1				
49. Malignant tumors of other or unspecified organs	27						..					3	7	5	8	4		12	15		16	9	1	1	8	16	3			4			3	4	2	2	3	4	2	2	1
Total deaths from cancer	87									2	2	15	15	24	25	4		42	45		55	28	2	2	16	56	15			6	3	3	10	11	5	13	5	13	8	6	4
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	2											1				1			2		1	1				1	1						1					1		
52. Chronic rheumatism, osteo-arthritis, gout	4							1					1	1	1			2	2		4				3		1										1	1		2
54. Pellagra	1												1						1					1	1										1					
56. Rickets	1	1																1			1				1					1										
57. Diabetes	11									1		2	4	3	1			7	4		8	2	1			10	1			2	1	1		1		1		3	1	1	
58A. Pernicious anaemia	11										1	1	4	2	3			7	4		10	1			1	8	2			1			1	1	3		1		1	1	2
58B. Other anaemias and chlorosis	4					1				1	1				1			2	2			3		1	1	2	1					2				1	1			
60A. Exophthalmic goitre	1									1									1		1				1															1
60B. Other diseases of the thyroid gland	3										1	1		1					3		2		1			3												1	2	
63. Diseases of the adrenals	2											2						1	1		2					2						2							
66. Alcoholism (acute or chronic)	1										1								1		1					1			1										
III.—Diseases of the Nervous System.																																								
Group Total	134	18					1	2	7	9	16	17	27	24	12	1		65	69		96	31	2	5	52	57	24		1	11	8	9	12	19	5	8	16	11	16	7	12
70. Encephalitis	5						1			2	1	1						3	2		4	1			1	4				1						1	3				
71A. Meningitis	6	3									1	1		1				3	3		6				4	1	1				1	2		1	1				1		
71B. Cerebrospinal meningitis	1	1																1			1				1									1							
72. Tabes dorsalis (locomotor ataxy)	2												1		1			2			2					2				1							1				
73. Other diseases of the spinal cord	7									1			1	4			1	4	3		6	1			3	3	1						2	1			1	2	1		
74A. Cerebral haemorrhage, apoplexy	42	2						1				4	13	14	8			23	19		26	14	1	1	11	18	13			4	3	4	9	6	1	2	5	1	2	3	2
74B. Cerebral thrombosis and embolism, apoplexy	2														1	1		2				2				2								1				1		
75A. Hemiplegia	9	1										1	1	2	3	1		4	5		7	2			1	4	4				1			3			1		1	1	2
75B. Other forms of paralysis	6											1	2		2	1		2	4		4	2			1	3	2					1			3	1	1			
76. General paralysis of the insane	12									1	5	5	1					11	1		4	3	1	4	6	6			2			1	1			3		3	1	1
77. Other forms of mental alienation	21									2	2	5	4	5	3			1	20		17	4			9	10	1		1			1	2	1	1	1	5	4	1	5
78. Epilepsy	2												1	1				2			2					2						1		1						
80. Infantile convulsions (under 5 years of age)	8	8																5	3		8				8					1	2		1			1	1			2
82B. Neuritis	1												1						1		1					1				1										
84. Other diseases of the nervous system	4											2	1			1		2	2		3	1			2	1	1			1		1					1	1		
86A. Diseases of the ears	5	3						1						1					5		4	1			4		1			1			1			1		2		
86B. Diseases of the mastoid process (or sinus)	1									1									1		1				1									1						

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LONDON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
II.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																									
Group Total	61		1				1		1	2	6	3	14	12	12	9		33	28		37	20	4		16	33	12			4	6	9	5	4	3	2	5	2	9	9	3
128. Acute nephritis	3		1				1						1						3		3				3														1	1	
129. Chronic nephritis (Bright's disease)	35								1		5	1	10	9	4	5		19	16		21	11	3		7	20	8			2	4	5	4	3	2	1	2	1	5	4	2
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	6									1	1	1		1	2			3	3		5		1		2	4				1	1			1		1		1	1	
133. Diseases of the bladder	2													1		1		1	1		2				1	1						1						1		
135. Diseases of the prostate	10												1	1	5	3		10			2	8			2	5	3			1		2		1		1	2			2	1
137. Cysts and other benign tumors of the ovary	1												1						1		1					1												1		
139. Benign tumors of the uterus	2											1	1						2		2				1	1					1					1				
141. Other diseases of the female genital organs	1									1									1		1					1						1						1		
142. Non-puerperal diseases of the breast	1														1				1			1					1											1		
VIII.—The Puerperal State.																																								
Group Total	9								1	2	5	1							9		8	1				9				1		1		1	1	1		2		2
143A. Abortion	1										1								1		1					1														1
143B. Ectopic gestation	1										1								1		1					1									1					
143C. Other accidents of pregnancy	1										1								1		1					1												1		
145C. Other accidents of labor	3								1		1	1							3		2	1				3				1					1		1		
146. Puerperal sepsis	2									1	1								2		2					2							1						1
148. Puerperal albuminuria and convulsions	1									1									1		1					1								1					
IX.—Diseases of the Skin and Cellular Tissue.																																							
Group Total	9	3								1		1			1	3		7	2		6	3			5	3	1					1	1			5		1			1
151. Gangrene	5									1					1	3		5			3	2			2	2	1						1			3		1			
153. Phlegmon, acute abscess	3	2										1						1	2		2	1			2	1										2					1
155. Other diseases of the skin and its adnexa	1	1																1			1				1							1								
Diseases of the Bones and Organs of Locomotion.																																								
Group Total	3								1						1	1		1	2		3				1	1	1					1							1	1	
156. Diseases of the bones (tuberculosis and rickets excepted)	1								1										1		1				1							1								
157. Diseases of the joints (tuberculosis and rheumatism excepted)	1															1			1		1						1												1	
158. Other diseases of the organs of locomotion	1														1			1			1					1												1		

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CAUSES OF DEATH IN THE CITY OF NIAGARA FALLS, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	172	36	5	4	4	2	4	3	4	14	14	15	15	18	19	15		90	82		131	18	21	2	84	57	31			11	19	12	21	13	7	7	16	11	14	19	22
I. Endemic, Epidemic and Infectious Diseases.																																								
Group Total	16		2	1	1		1		2	3	3	3						7	9		13	2	1		11	4	1					4	1	4	1	1		1	1		3
1A. Typhoid fever	5				1				1	3								3	2		5				4	1						1		1	1	1					
9. Whooping cough	2		2															1	1		1	1			2												1				1
10. Diphtheria	2			1			1											1	1		2				2																2
11A. Influenza with pneumonic complications specified	2								1			1						1	1		2				1	1						1	1								
21. Erysipelas	1											1							1		1					1							1								
31. Tuberculosis of the respiratory system	3										3								3		2	1			1	1	1					2		1							
Total deaths from tuberculosis	3										3								3		2	1			1	1	1					2		1							
38E. Syphilis, stage not indicated	1											1						1					1		1								1								
II.—General Diseases.																																								
Group Total	18						1	1			1	2	2	4	5	2		9	9		14	4			2	10	6			1			5		2		1	2	2	2	3
44. Malignant tumors of the stomach and liver	6										1	1	1	1	1	1		3	3		6					4	2						2				1			1	2
45. Malignant tumors of the peritoneum, intestines and rectum	2													1	1			1	1			2				1	1								1				1	
46. Malignant tumors of the female genital organs	2													1	1				2		2					1	1						2							
49. Malignant tumors of other or unspecified organs	4													1	2	1		4			2	2				3	1						1				1	2		
Total deaths from cancer	14										1	1	1	4	5	2		8	6		10	4				9	5						5		1		1	1	2	2	2
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	1											1						1			1					1				1										
51. Rheumatic fever	1						1											1			1				1												1			

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NIAGARA FALLS—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII. Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																									
Group Total	12	1									1	2	2	3	1	2		6	6		8	1	3		1	6	5					3	3	1			1	1		1	2
128. Acute nephritis	2	1										1						1	1		2				1	1							1			1				
129. Chronic nephritis (Bright's disease)	5												2	1	1	1		3	2		4		1			3	2				2	2						1	
135. Diseases of the prostate	2													1		1		2					2			2						1				1			
139. Benign tumors of the uterus	2											1		1					2		1	1					2				1							1	
141. Other diseases of the female genital organs	1											1							1		1						1												1
VIII.—The Puerperal State.																																								
Group Total	3								1		2								3		2	1				3						1				1	1			
144. Puerperal haemorrhage	1										1								1		1					1										1				
146. Puerperal sepsis	2									1	1								2		1	1				2						1				1			
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1				1														1		1				1														1
156. Diseases of the bones (tuberculosis and rickets excepted)	1				1														1		1				1														1
XI.—Malformations.																																								
Group Total	3	3																2	1		3				3							1		1		1				
159A. Congenital malformations not otherwise specified (still-births excepted)	1	1																1			1				1							1								
159C. Congenital malformations of the heart	2	2																1	1		2				2									1		1				
XII.—Diseases of Early Infancy.																																								
Group Total	18	18																10	8		18				18						3		4		1	1	1		1	3	4
160B. Congenital debility, icterus and scleroma	6	6																3	3		6				6						1		1					1	2	1
161A. Premature birth	7	7																3	4		7				7								3		1	1				2
161B. Injury at birth	2	2																1	1		2				2						1					1				
162. Other diseases peculiar to early infancy	3	3													3			3							3						1							1	1

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CAUSES OF DEATH IN THE CITY OF OTTAWA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**1644**	**422**	**61**	**27**	**11**	**20**	**68**	**22**	**49**	**94**	**103**	**113**	**152**	**181**	**188**	**132**	**1**	**839**	**805**		**1370**	**147**	**66**	**61**	**882**	**510**	**251**	**1**		**144**	**142**	**160**	**132**	**130**	**94**	**130**	**168**	**151**	**113**	**137**	**143**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	261	46	16	14	6	7	32	4	20	45	26	15	12	9	2	7	..	114	147	...	229	8	9	15	194	55	12	...	...	23	25	23	23	21	15	18	26	27	15	23	22
1A. Typhoid fever	8	...	..	..	..	..	..	1	..	1	3	1	2	..	..	..	..	4	4	...	8	..	..	..	5	3	..	..	..	..	..	..	..	1	..	1	1	3	1	..	1
1B. Paratyphoid fevers	1	...	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	...	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
6. Smallpox	3	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2	1	...	2	..	1	..	1	1	1	..	..	1	1	..	..	1	..	..	..	..	..	..	..
8. Scarlet fever	8	1	..	3	..	..	3	..	..	1	..	..	..	..	..	..	..	4	4	...	6	..	..	2	7	1	..	..	..	1	1	2	..	1	..	..	..	1	..	..	2
9. Whooping cough	16	8	..	6	2	..	..	..	..	..	..	..	..	..	..	..	..	4	12	...	15	..	..	1	16	..	..	..	..	2	1	1	3	1	2	2	..	1	1	2	..
10. Diphtheria	52	5	6	4	5	7	22	2	1	..	..	..	..	..	..	..	..	24	28	...	51	..	..	1	52	..	..	..	..	5	7	4	4	3	..	..	4	5	4	7	9
11A. Influenza with pneumonic complications specified	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2	..	...	2	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
11B. Influenza without pneumonic complications specified	9	..	..	..	..	..	..	..	..	1	..	..	1	3	..	4	..	3	6	...	7	2	..	..	1	4	4	..	..	..	2	..	2	2	..	..	..	..	2	1	..
13. Mumps	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
15. Cholera nostras	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	9	6	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	3	6	...	7	..	..	2	8	..	1	..	..	..	..	..	..	..	..	..	5	2	2	..	..
21. Erysipelas	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	...	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23. Encephalitis lethargica	2	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	...	2	..	..	..	2	..	..	..	..	1	..	1	..	1	..	..	..	1	..	..	..
25. Purulent infection, septicaemia	12	1	..	..	..	..	1	..	..	2	3	1	1	3	..	..	..	7	5	...	10	..	1	1	3	9	..	..	..	3	2	..	2	..	2	1	..	1	..	..	1
27. Anthrax	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2	..	...	2	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..
29. Tetanus	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	...	2	..	..	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	88	1	..	..	..	..	2	..	15	33	17	11	8	1	..	..	..	31	57	...	73	4	4	7	55	30	3	..	..	4	8	10	5	7	5	12	11	7	3	10	6
32. Tuberculosis of the meninges and central nervous system generally	12	2	2	2	1	..	2	..	..	2	..	..	1	..	..	..	..	5	7	...	9	1	2	...	10	1	1	..	..	2	1	2	1	..	..	1	3	1	..	..	1
33. Tuberculosis of the intestines and peritoneum	5	..	..	..	..	..	..	..	2	2	1	..	..	..	..	..	..	..	5	...	4	..	..	1	3	2	..	..	..	..	..	..	1	..	2	..	1	..	..	1	..
35. Tuberculosis of the joints	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	...	2	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
36B. Tuberculosis of the bones (vertebral column excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
36C. Tuberculosis of the lymphatic system (mesenteric and retroperitoneal glands excepted)	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	...	2	..	..	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..
36D. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	...	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
37A. Disseminated tuberculosis—acute	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2	...	1	..	1	...	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..

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OTTAWA—Continued.

Number of Column.	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
74B. Cerebral thrombosis and embolism	4											2		2			1	3		3			1	1	2	1								1	1		1		1
75A. Hemiplegia	7										1		5	1			4	3		6			1		6	1			1	2		1				1	1		1
75B. Other forms of paralysis	4											1		3			2	2		3	1				2	2			1	1	1		1						
76. General paralysis of the insane	2												1		1		2			2					2				1	1									
77. Other forms of mental alienation	1										1							1		1						1												1	
79. Convulsions (non-puerperal; 5 years and over)	1										1						1			1					1				1										
80. Infantile convulsions (under 5 years of age)	5	5											1				4	1		5				5					1		1	3							
82B. Neuritis	1												1				1					1			1					1									
83. Cerebral softening	1												1				1			1					1				1										
84. Other diseases of the nervous system	5	1		1								2		1			1	4		3	2			2	3					1	1	1	1		1				
86A. Diseases of the ears	4	1					2				1						2	2		3		1		4								1	3						
86B. Diseases of the mastoid process (or sinus)	2	1					1										2			2				2														1
IV.—Diseases of the Circulatory System.																																							
Group Total	217	1				1	5	3	5	7	9	13	26	48	55	44	113	104		162	32	10	13	55	85	76	1		22	19	26	10	17	19	17	15	17	17	19	19
88. Acute endocarditis and myocarditis	20						3	1	1	2	4	2	6	1			15	5		16	3	1		7	12	1				1	4	1	3		2	2		3	1	3
89. Angina pectoris	1												1				1			1					1								1							
90. Other diseases of the heart	130					1	2	2	3	5	4	8	16	33	32	24	66	64		100	18	4	8	34	45	50	1		16	12	12	6	8	14	10	10	12	8	7	15
91B. Arteriosclerosis	59										1	3	14	23	18		27	32		39	10	5	5	10	25	24			5	6	9	3	5	4	5	2	4	5	10	1
92. Atheroma and other diseases of the arteries	2														2		1	1		1	1			1		1									1			1	
93. Embolism and thrombosis (not cerebral)	3										1	2					2	1		3				1	2				1		1				1			
95. Diseases of the lymphatic system (lymphangitis, etc.)	1	1																1		1				1									1					
96. Haemorrhage without determined cause; other diseases of the circulatory system	1							1									1			1				1												1		
V.—Diseases of the Respiratory System.																																							
Group Total	170	47	13	4		3		2	3	9	14	7	13	18	21	15	1	90	80		132	20	11	7	92	48	30			23	13	25	12	14	12	5	8	9	11	24	14
97. Diseases of the nasal fossae and of their annexa	1					1											1			1				1							1								
99A. Bronchitis, acute	3		1								1			1				3		3				2		1				1							2	
99B. Bronchitis, chronic	3											1			2		1	2		2		1			2	1			1				1	1					
99C. Bronchitis, not otherwise defined, under 5 years of age	2	1	1														1	1		2				2						1						1		
99D. Bronchitis, not otherwise defined over 5 years of age	4											1	1		2		2	2		3	1			1	2	1					1			1		1	1	
100A. Broncho-pneumonia	44	25	5	2		2			1		1			2	6		20	24		41	2		1	35	2	7			5	5	9	1	3	1		2	4	4	7	3
100B. Capillary bronchitis	2			1										1			1	1		1			1	1		1			1										
101A. Pneumonial lobar	37	6	2					1	2	7	6	4	3	4	2		25	12		25	7	3	2	19	15	3			6	2	2	2	4	5			4	6	6

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OTTAWA—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII. The Puerperal State.																																									
Group Total	14								2	4	4	4							14		13	1			2	12							2	2	1	1	4	2		2	
143A. Abortion	1											1							1		1					1							1								
143B. Ectopic gestation	1									1									1		1					1													1	
143C. Other accidents of pregnancy	2											2							2		2					2									1				1	
144. Puerperal haemorrhage	1											1							1		1					1							1							
145A. Other accidents of labor	1									1									1		1					1											1			
146. Puerperal sepsis	2									1	1								2		2				1	1										1	1			
147. Phlegmasia, alba dolens; puerperal embolism or sudden death in the puerperium	2										2								2		2					2											2			
148. Puerperal albuminuria and convulsions	4								2	1	1								4		3	1			1	3							1	1	1		1				
IX. Diseases of the Skin and Cellular Tissue.																																								
Group Total	10	3										1		1	2	3		5	5		5	4		1	4	4	2			1			1	1		1	1		3	2
151. Gangrene	5													1	2	2		3	2		2	3				3	2			1			1						2	1
152. Furuncle	1	1																1						1	1											1				
153. Phlegmon, acute abscess	3	1										1				1			3		2	1			2	1								1			1			1
155. Other diseases of the skin and its annexa	1	1																1			1				1													1		
X. Diseases of the Bones and Organs of Locomotion																																							
Group Total	5	1				1				1				1	1			3	2		4		1		3	2						2	1			1		1		
156. Diseases of the bones (tuberculosis and rickets excepted)	2	1				1												1	1		2				2							1				1				
157. Diseases of joints (tuberculosis and rheumatism excepted)	3									1				1	1			2	1		2		1		1	2						1	1					1		
XI.—Malformations.																																							
Group Total	19	19																10	9		19				19					1	2	3	5	3	1	1	1		2		
159A. Congenital malformations not otherwise specified (still-births excepted)	12	12																6	6		12				12						2	2	4	1	1	1		1		
159C. Congenital malformations of the heart	7	7																4	3		7				7					1		1	1	2			1		1		

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CAUSES OF DEATH IN THE CITY OF OWEN SOUND, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	185	38	3	3	2	1	5	3	4	6	10	14	23	21	24	28		109	76		147	32	4	2	77	73	35			19	19	15	19	12	7	17	12	21	13	14	17
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	23	5	1	2	1	1	2	1	1	2	2		2	1		2		17	6		21	2			18	4	1			2	1	3	2	1		1	4	4	4	1
1A. Typhoid fever	1									1								1			1				1												1			
8. Scarlet fever	2	1					1											1	1		1	1			2															
9. Whooping cough	3	2				1												2	1		3										1	2						1		
10. Diphtheria	5			2	1		1	1										4	1		5				5								1					1	3	1
16c. Dysentery, due to other causes or of unspecified origin	1															1		1			1					1												1			
21. Erysipelas	1															1			1		1					1						1								
25. Purulent infection, septicaemia	2	1												1				2			2				1	1							1				1			
29. Tetanus	1												1					1			1					1											1			
31. Tuberculosis of the respiratory system	4								1	1	2							2	2		4				4					2				1			1			
32. Tuberculosis, meninges and central nervous system generally	3	1	1										1					3			2	1			2	1									1		2			
Total deaths from tuberculosis	7	1	1						1	1	2		1					5	2		6	1			6	1				2				1		1	1	2			
II.—General Diseases.																																								
Group Total	24						1		1		1	6	5	6	3	1		11	13		21	2	1		6	14	4			3	1	5	3		1	3		2		1	5
43. Malignant tumors of the buccal cavity	1														1			1			1					1								1						
44. Malignant tumors, stomach and liver	2												1			1		1	1			1	1		1	1						1			1					
45. Malignant tumors, peritoneum, intestines and rectum	2													1	1			1	1		2					1	1				1		1							
46. Malignant tumors, female genital organs	2										1		1						2		2					2			1										1	
47. Malignant tumors, breast	1													1					1			1					1												1	
49. Malignant tumors of other or unspecified organs	2											1		1					2		2				1		1				1							1		
Total deaths from cancer	10										1	1	2	3	2	1		3	7		7	2	1		1	5	4			1	1	1	2		1	1			1	2

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OWEN SOUND—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
113. Diarrhoea and enteritis (under 2 years)	8	6	2															5	3		8				8											1	2	4		1	
114. Diarrhoea and enteritis (over 2 years)	3													1	1	1		3			1	2				2	1									1		2			
117. Appendicitis and typhlitis	5									1	1	2	1					5			4		1		2	3				1					1	1	1	1		
118B. Intestinal obstruction	2							1				1							2		2				1	1				1					1					
124. Other diseases of the liver	1											1							1		1					1														
126. Peritonitis of unstated origin	1						1											1			1				1												1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and its annexa.																																								
Group Total	4								1				1		1	1		2	2		2	2			1	1	2				1				1			1		1
129. Chronic nephritis (Bright's disease)	1								1									1			1				1									1					
135. Diseases of the prostate	1															1		1				1				1				1									
137. Cysts and other benign tumors of the ovary	1														1				1			1				1												1		
141. Other diseases of the female genital organs	1												1						1		1					1													1	
VIII.—The Puerperal State.																																								
Group Total	4									1	2	1							4		3	1				4				1				1	1			1		
144. Puerperal haemorrhage	2										1	1							2		1	1				2				1							1			
146. Puerperal sepsis	2									1	1								2		2					2							1	1						
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	1												1					1			1					1							1							
151. Gangrene	1												1					1			1					1							1							
XI.—Malformations.																																								
Group Total	4	3					1											3	1		4				4								1	2			1			
159A. Congenital malformations not otherwise specified (still-births excepted)	2	2																2			2				2								1				1			
159C. Congenital malformations of the heart	2	1					1											1	1		2				2									2						

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CAUSES OF DEATH IN THE CITY OF PETERBOROUGH, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	273	45	7	2	2	4	8	6	2	13	13	16	22	45	54	34		138	135		212	49	5	7	120	90	63			24	6	21	15	31	19	25	28	31	28	19	26
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	34	1	1	2	2	3	5	3	1	6	4	2	1	2	1			14	20		30	2		2	24	8	2			1		3	2	1	5	2	2	5	4	4	5
1A. Typhoid fever	2										1		1					2			2					2				1				1						
8. Scarlet fever	10		1	2	1	2	2			2								3	7		9			1	8	2						1		2			1	1	2	2
9. Whooping cough	1	1																1			1				1									1						
10. Diphtheria	8				1	1	3	3										4	4		7	1			8												1	3	1	1	2
11B. Influenza without pneumonic complications specified	1											1							1		1					1											1				
25. Purulent infection, septicaemia	1													1				1			1														1						
31. Tuberculosis of the respiratory system	10								1	3	3	1		1	1			2	8		9	1			6	2	2					3	1	1	1	1		1	1		1
32. Tuberculosis of the meninges and central nervous system generally	1									1								1						1	1												1			
Total deaths from tuberculosis	11								1	4	3	1		1	1			3	8		9	1		1	7	2	2					3	1	1	1	1		1	2		1
II.—General Diseases.																																								
Group Total	45	1								1	1	7	5	16	13	1		16	29		37	6	1	1	13	21	11			4	1	2	2	7		7	7	5	6	1	3
43. Malignant tumors of the buccal cavity	3													1	2			3			2			1	3								2				1			
44. Malignant tumors of the stomach and liver	11												1	8	2			4	7		9	2			2	5	4					2	2		2	2	2	1		
45. Malignant tumors of the peritoneum, intestines and rectum	4												1	1	2			1	3		4					2	2				1		1		1		1			
46. Malignant tumors of the female genital organs	2													2					2		2				1	1							1			1				
47. Malignant tumors of the breast	2											1			1				2		2				1	1			1									1		
49. Malignant tumors of other or unspecified organs	7										1			4	2			3	4		5	1	1		1	3	3			3	1					3				
Total deaths from cancer	29										1	1	2	16	9			11	18		24	3	1	1	8	12	9			4	1	1	2	6		3	6	4	2		

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PETERBOROUGH—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	25	7	2				2	2	1		2	2	2	2	3			13	12		21	4			19	2	4			2		3	2	2	1	4	3	3	4		1
108B. Other diseases of the buccal cavity and its annexa	1							1											1		1				1													1			
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2						1					1							2		2				1	1					1					1				
112. Other diseases of the stomach (cancer excepted)	2													1	1				2			2			1		1		2											
113. Diarrhoea and enteritis (under 2 years)	7	6	1															6	1		7				7							1			3		2	1		
114. Diarrhoea and enteritis (over 2 years)	2														2				2		1	1					2								1		1			
117. Appendicitis and typhlitis	5						1	1	1				1	1				3	2		5				4		1						2	1		1			1
118B. Intestinal obstruction	2	1	1															2			2				2											1	1			
119B. Other diseases of the intestine	1										1								1		1				1									1						
124. Other diseases of the liver	1											1						1			1					1							1							
125. Diseases of the pancreas	1										1								1		1				1											1				
126. Peritonitis of unstated origin	1												1					1				1			1						1									
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	15							1		2	1		1	3	6	1		9	6		11	4			3	7	5			1		1	2	2	1	1	4		2	1
128. Acute nephritis	3													2	1			1	2		3					2	1						1		1		1			
129. Chronic nephritis (Bright's disease)	8							1		1			1	1	4			6	2		5	3			2	4	2			1					1		1	2		2	1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	2									1						1		1	1		1	1			1		1					1					1			
133. Diseases of the bladder	1														1			1			1						1							1						
137. Cysts and other benign tumors of the ovary	1										1								1		1					1									1					
VIII.—The Puerperal State.																																								
Group Total	1										1								1		1					1								1						
148. Puerperal albuminuria and convulsions	1										1								1		1					1								1						
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	4											1		1	1	1		2	2		2	2				2	2				1		1	1	1					
151. Gangrene	1																1		1			1				1							1							
153. Phlegmon, acute abscess	2											1			1			1	1		1	1				1	1				1				1					
155. Other diseases of the skin and its annexa	1													1				1			1					1								1						

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CAUSES OF DEATH IN THE CITY OF PORT ARTHUR, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	197	45	5	5	4	3	4	1	7	20	19	28	19	13	19	5		98	99		110	40	33	14	103	75	17		2	15	14	24	22	16	15	16	18	20	8	12	17
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	24	1	1	1	1	..	..	..	3	6	5	4	..	..	1	1	..	13	11	..	9	4	10	1	14	8	2	..	..	..	3	5	1	3	3	..	2	..	2	1	4
1B. Paratyphoid fevers	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
11A. Influenza, with pneumonic complications specified	3	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	1	..	2	..	1	..	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2
11B. Influenza, without pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
31. Tuberculosis of the respiratory system	13	..	..	1	..	..	..	..	3	4	4	1	..	..	..	..	..	5	8	..	6	1	5	1	8	5	..	..	..	..	1	2	1	2	3	..	1	..	1	1	1
32. Tuberculosis, meninges and central nervous system generally	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
37A. Disseminated tuberculosis—acute	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	16	..	..	1	..	..	..	..	3	6	4	2	..	..	..	..	..	8	8	..	6	1	8	1	9	7	..	..	..	..	2	3	1	2	3	..	2	..	1	1	1
II.—General Diseases.																																								
Group Total	23	..	1	..	..	..	2	..	2	1	1	4	9	2	1	..	..	10	13	..	7	9	4	3	11	12	..	..	..	..	1	1	2	1	2	3	3	5	..	3	2
44. Malignant tumors, stomach and liver	7	..	..	..	..	..	..	..	..	..	..	2	4	1	..	..	..	6	1	..	1	5	..	1	2	5	..	..	..	..	1	..	..	..	1	1	..	2	..	2	..
45. Malignant tumors, peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
46. Malignant tumors, female genital organs	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	..	..	1	..	1	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
49. Malignant tumors of other or unspecified organs	3	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	2	1	..	2	..	1	..	1	2	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..
Total deaths from cancer	13	..	..	..	..	..	..	..	..	..	..	3	8	2	..	..	..	8	5	..	4	6	1	2	4	9	..	..	..	..	1	..	1	..	2	2	1	4	..	2	..
51. Rheumatic fever	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2	..	1	..	1	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..

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PORT ARTHUR—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa																																									
Group Total	12	1								1	1	3	3	1	1	1		4	8		5	4	2	1	1	11				1		5		1	1	3				1	
128. Acute nephritis	1											1							1				1			1					1										
129. Chronic nephritis (Bright's disease)	5											2	2	1				2	3		2	2	1			5					3				2						
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	3	1								1			1						3		2	1			1	2				1				1					1		
133. Diseases of the bladder	1														1			1				1				1									1						
135. Diseases of the pro-tate	1															1		1						1		1					1										
138. Salpingitis and pelvic abscess	1										1								1		1					1								1							
VIII.—The Puerperal State.																																								
Group Total	5									3	2								5		1	1	3			5				1				1	1	1			1	
143a. Abortion	1									1									1				1			1													1	
143c. Other accident of pregnancy	1										1								1				1			1										1				
144. Puerperal haemorrhage	2									1	1								2		1		1			2								1	1					
145c. Other accidents of labor	1									1									1			1				1				1										
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	1															1		1			1					1					1										
151. Gangrene	1															1		1			1					1					1										
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1													1				1			1					1								1							
156. Diseases of the bones (tuberculosis and rickets excepted)	1													1				1			1					1								1							
X.—Malformations.																																								
Group Total	2	2																1	1		2				2												1	1		
159a. Congenital malformations not otherwise specified (still-births excepted)	1	1																1			1				1												1			
159c. Congenital malformations of the heart	1	1																	1		1				1													1		

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CAUSES OF DEATH IN THE CITY OF ST. CATHARINES, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	298	65	7	1	4	4	8	10	9	22	17	15	27	35	46	27	1	171	127		205	68	23	2	142	95	61			27	32	32	20	29	15	24	21	30	20	24	24
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	49	6	1	1	2	2	5	3	5	12	3	3	3	1	2	...	...	21	28	...	37	6	6	...	34	12	3	...	...	6	7	4	5	3	3	2	3	5	2	3	6
8. Scarlet fever	2	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...
9. Whooping cough	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	...	...	3	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...
10. Diphtheria	10	1	...	1	1	2	3	2	...	...	...	...	...	...	...	...	...	1	9	...	8	1	1	...	10	...	...	...	...	2	2	1	1	1	1	...	...	...	...	2
11A. Influenza, with pneumonic complications specified	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
11B. Influenza, without pneumonic complications specified	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Mumps	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
25. Purulent infection, septicaemia	4	...	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	3	1	...	4	...	...	...	3	1	...	...	...	1	...	1	2	...	...	...	...	1	...	...
31. Tuberculosis of the respiratory system	22	1	...	...	...	...	1	...	3	9	1	3	3	1	...	...	...	11	11	...	15	4	3	...	10	9	3	...	...	1	2	...	2	2	1	1	3	5	1	1	3
32. Tuberculosis, meninges and central nervous system generally	3	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	1	...	2	...	1	...	3	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...
33. Tuberculosis of the intestines and peritoneum	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
37B. Disseminated tuberculosis, chronic	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Total deaths from tuberculosis	27	2	1	...	...	...	2	...	4	10	1	3	3	1	...	...	...	14	13	...	18	4	5	...	14	10	3	...	...	1	2	1	2	2	1	2	3	5	1	3	4
II.—General Diseases.																																									
Group Total	41	...	1	...	...	...	...	...	...	1	3	2	11	10	9	4	...	20	21	...	21	16	4	...	5	20	16	...	...	...	1	4	3	4	2	6	5	2	4	4	6
44. Malignant tumors, stomach and liver	13	...	...	...	...	...	...	...	...	...	1	1	2	4	4	1	...	10	3	...	5	7	1	...	1	7	5	...	...	...	1	1	2	1	...	3	...	...	...	3	2
45. Malignant tumors, peritoneum, intestines and rectum	3	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	2	1	...	1	1	1	...	...	2	1	...	...	...	...	...	...	...	...	...	2	1	...	...	...
46. Malignant tumors, female genital organs	4	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	4	...	2	2	...	...	...	2	2	...	...	...	...	...	...	1	...	1	...	...	...	...	2
47. Malignant tumors, breast	4	...	...	...	...	...	...	...	...	...	...	1	2	...	...	1	...	...	4	...	2	1	1	...	1	1	2	...	...	...	...	1	...	...	1	1	...	...	1	...	...
48. Malignant tumors, skin	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
49. Malignant tumors of other or unspecified organs	6	...	1	...	...	...	...	...	...	...	...	...	3	1	...	1	...	4	2	...	4	1	1	...	2	4	...	...	...	...	...	1	...	1	...	...	1	...	1	1	1

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ST. CATHARINES—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
113 Diarrhoea and enteritis (under 2 years)	14	13	1															8	6		14				14								1		1	3	8	1		
114 Diarrhoea and enteritis (over 2 years)	1										1								1		1					1											1			
117 Appendicitis and typhlitis	6							1	1	2	2							6			5	1			4	1	1			1		1		1	1			2	
119B Other diseases of the intestine	1													1					1		1				1										1				
122B Cirrhosis, not returned as alcoholic	2											1			1			1	1		1	1				1	1									1	1		
123 Biliary calculi	1													1					1		1					1												1	
126 Peritonitis of unstated origin	1										1							1			1					1								1					
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa																																								
Group Total	16								1	2	2			3	5	3		12	4		9	4	3		4	8	4			2		2	3		2			2	1	2	2
128. Acute nephritis	1									1									1				1			1				1									
129. Chronic nephritis (Bright's disease)	6									1	2			1	1	1		4	2		3	1	2		2	3	1			1		2	1		1				1	
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1													1				1			1					1								1						
133. Diseases of the bladder	2								1					1				2			1	1			1	1													2
135. Diseases of the prostate	5														3	2		5			3	2			1	2	2					2			1	1	1		
137. Cysts and other benign tumors of the ovary	1														1				1		1					1										1				
VIII.—The Puerperal State.																																								
Group Total	3									2	1								3		1	1	1			3				1			1				1			
143A. Abortion	1										1								1		1					1											1			
145C. Other accidents of labor	1									1									1				1			1							1							
146. Puerperal sepsis	1									1									1			1				1				1										
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	1									1								1				1			1					1										
153. Phlegmon, acute abscess	1									1								1				1			1					1										
XI.—Malformations.																																								
Group Total	5	5																5			5				5					1				1		1		2			
159A. Congenital malformations not otherwise specified (still-births excepted)	4	4																4			4				4					1				1				2			
159C. Congenital malformations of the heart	1	1																1			1				1										1					

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CAUSES OF DEATH IN THE CITY OF ST. THOMAS, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**223**	**35**	**7**		**1**	**3**	**13**	**9**	**2**	**11**	**8**	**12**	**23**	**33**	**37**	**29**		**111**	**112**		**163**	**47**	**12**	**1**	**87**	**82**	**47**		**7**	**26**	**28**	**19**	**15**	**16**	**7**	**20**	**19**	**20**	**14**	**24**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	29	1	2	..	1	1	6	2	..	4	3	2	1	3	2	1	..	14	15	..	22	5	2	..	16	11	1	..	1	7	8	2	..	..	2	1	3	4	1	..	1
7. Measles	3	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	1	..	2	..	1	..	2	..	..	1	..	2	1	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	11	..	1	..	1	1	5	2	..	..	1	..	..	..	..	..	..	9	2	..	10	..	1	..	10	1	..	..	..	2	4	1	..	..	..	1	1	1	1	..	..
11B. Influenza, without pneumonic complications specified	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	1	1	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	6	..	..	..	..	..	..	..	..	3	..	2	1	..	..	..	..	..	6	..	4	2	..	..	2	4	..	..	..	..	2	1	..	..	1	..	1	1	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
34. Tuberculosis of the vertebral column	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	1	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	10	..	..	..	..	..	..	..	..	4	1	2	1	1	..	1	..	2	8	..	7	3	..	..	4	6	..	..	..	1	2	1	..	1	..	2	2	..	..	1	..
40. Gonococcal infection (ophthalmia excepted)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	34	..	1	..	..	..	..	..	..	1	..	3	7	13	6	3	..	15	19	..	26	6	1	1	3	22	6	..	3	3	3	2	3	..	3	2	2	3	3	4	6
44. Malignant tumors of the stomach and liver	7	..	..	..	..	..	..	..	..	..	..	..	1	3	1	2	..	3	4	..	6	..	..	1	1	4	1	..	1	1	..	..	..	..	..	1	..	1	1	3	..
45. Malignant tumors of the peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	3	..	1	2	..	..	..	2	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1
46. Malignant tumors of the female genital organs	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
47. Malignant tumors of the breast	3	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	3	..	2	1	..	..	..	2	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..
48. Malignant tumors of the skin	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
49. Malignant tumors of other or unspecified organs	5	..	..	..	..	..	..	..	..	..	..	..	1	3	1	..	..	3	2	..	3	2	..	..	..	4	1	..	..	..	..	..	..	..	1	1	..	1	1	..	1

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ST. THOMAS—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI.—Diseases of the Digestive System.																																									
Group Total	20	6	1			1		2	1	3		1		2	2	1		13	7		16	3	1		15	4	1			3	1	1	1			2	1	2	5	2	2
108A. Diseases of the teeth and gums	1									1								1			1					1													1	
113. Diarrhoea and enteritis (under 2 years)	7	6	1															4	3		7				7					2						1		1	2		1
114. Diarrhoea and enteritis (over 2 years)	1									1								1			1				1													1			
117. Appendicitis and typhlitis	6						2	1		1		1		1				4	2		4	1	1		4	2				1	1	1			1	1		1		
118A. Hernia	2													1	1			2			1	1			1	1													1
118B. Intestinal obstruction	1					1													1		1				1										1					
124. Other diseases of the liver	2														1	1		1	1		1	1			1		1										2		
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																								
Group Total	10									1		3	2	1	2	1		5	5		6	3	1		3	5	2				2	1	1	1		1		2	1		1
129. Chronic nephritis (Bright's disease)	5											3	1			1		1	4		3	2				4	1				1			1		1			1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1									1									1		1				1					1									
133. Diseases of the bladder	2														2			2			1	1			2							1				1			
134A. Stricture of the urethra	1												1					1					1				1										1		
135. Diseases of the prostate	1													1				1			1					1					1								
VIII.—The Puerperal State.																																								
Group Total	1								1										1				1			1												1		
144. Puerperal haemorrhage	1								1										1				1			1												1		
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	2												1	1				1	1		1	1				1	1							1				1		
151. Gangrene	2												1	1				1	1		1	1				1	1							1				1		
XI.—Malformations.																																							
Group Total	2	2																1	1		2				2							1						1	
159A. Congenital malformations not otherwise specified (still-births excepted)	1	1																1			1				1														1
159C. Congenital malformations of the heart	1	1																	1		1				1							1							

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CAUSES OF DEATH IN THE CITY OF SARNIA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**181**	**31**	**7**	**2**	**5**	**2**	**6**	**2**	**5**	**10**	**10**	**18**	**14**	**23**	**29**	**17**		**90**	**91**		**133**	**36**	**10**	**2**	**75**	**76**	**30**			**20**	**19**	**16**	**11**	**12**	**9**	**9**	**20**	**22**	**16**	**9**	**18**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	31	8	2	1	2	1	3	1	1	5	1	3	....	1	2	..	..	14	17	..	28	2	1	...	22	8	1	...	....	4	4	3	2	2	2	1	2	5	4	1	1
1A. Typhoid fever	3	...	..	..	..	..	..	..	..	2	..	..	....	1	..	..	..	3	..	..	3	..	..	..	1	2	..	..	..	..	..	..	..	..	1	..	2	..	..	..
7. Measles	1	1	..	..	..	..	..	..	..	....	..	..	....	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
8. Scarlet fever	2	..	1	..	..	..	..	..	..	1	..	..	....	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	4	4	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	3	1	..	4	..	..	..	4	..	..	..	..	..	..	1	..	..	1	..	..	2	..	..	..
10. Diphtheria	6	1	..	1	1	1	2	..	..	..	..	..	....	..	..	..	..	3	3	..	6	..	..	..	6	..	..	..	..	..	..	..	..	1	1	..	..	..	3	1	..
11A. Influenza with pneumonic complications specified	2	1	..	..	..	..	..	..	..	1	..	..	....	..	..	..	..	1	1	..	2	..	..	..	1	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	1	1	..	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..	1	..	1	..	..	...	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
15. Cholera nostras	1	..	1	..	..	..	..	..	..	..	..	..	....	..	..	..	..	..	1	..	1	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
23. Encephalitis lethargica	1	..	..	..	..	..	..	..	..	..	..	..	....	..	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	1	..	..	..	..	....	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
29. Tetanus	2	..	..	..	..	..	1	..	..	1	..	..	....	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..
31. Tuberculosis of the respiratory system	7	..	..	..	1	..	..	..	1	....	1	3	....	..	1	..	..	2	5	..	4	2	1	...	2	4	1	..	..	..	1	1	2	..	..	..	1	..	1	..	1
Total deaths from tuberculosis	7	..	..	..	1	..	..	..	1	....	1	3	....	..	1	..	..	2	5	..	4	2	1	...	2	4	1	..	..	..	1	1	2	..	..	..	1	..	1	..	1
II.—General Diseases.																																								
Group Total	31	....	..	1	..	..	..	..	..	....	3	8	7	6	6	..	..	13	18	..	22	8	1	..	2	25	4	..	..	3	3	2	1	1	1	2	4	1	4	4	5
44. Malignant tumors of the stomach and liver	7	....	..	..	..	..	..	..	..	....	..	2	2	2	1	..	..	5	2	..	5	2	..	..	..	5	2	..	..	1	..	..	..	1	..	1	1	1	1	1	1
45. Malignant tumors of the peritoneum, intestines and rectum	2	....	..	..	..	..	..	..	..	....	..	..	1	1	..	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..
46. Malignant tumors of the female genital organs	2	....	..	..	..	..	..	..	..	....	1	..	....	1	..	..	..	..	2	..	2	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
47. Malignant tumors of the breast	4	....	..	..	..	..	..	..	..	....	..	2	1	..	1	..	..	..	4	..	2	2	..	..	..	4	..	..	..	..	..	..	1	..	..	..	..	..	1	1	1
48. Malignant tumors of the skin	1	....	..	..	..	..	..	..	..	....	..	..	....	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
49. Malignant tumors of other or unspecified organs	6	....	..	1	..	..	..	..	..	....	..	1	2	..	2	..	..	4	2	..	4	2	..	..	1	4	1	..	..	1	1	..	..	..	1	..	..	..	..	2	1

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VI. Diseases of the Digestive System.																																										
Group Total	22	8	1	..	..	1	1	..	..	1	..	3	1	2	3	1	..	14	8	..	16	5	1	..	15	1	3	..	..	2	1	..	..	2	1	3	4	6	1	1	1
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
111A. Ulcer of the stomach	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
112. Other diseases of the stomach (cancer excepted)	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	1	..	1	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..
113. Diarrhoea and enteritis (under 2 years)	7	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7	..	..	..	7	..	..	..	..	..	..	..	..	..	..	1	1	4	..	..	1
117. Appendicitis and typhlitis	5	..	1	..	..	1	..	..	..	1	..	..	..	1	1	..	..	5	..	..	4	1	..	..	5	..	..	..	..	..	1	..	..	..	..	2	..	1	..	1	..
118B. Intestinal obstruction	3	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	2	..	3	..	..	..	1	2	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..
123. Biliary calculi	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..
126. Peritonitis of unstated origin	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																								
Group Total	9	..	..	..	1	..	1	..	1	..	..	..	1	2	3	..	..	4	5	..	8	..	1	..	2	5	2	..	..	2	..	..	1	..	..	1	..	3	1	..	1
128. Acute nephritis	2	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	1	..	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
129. Chronic nephritis (Bright's disease)	5	..	..	..	..	..	..	1	..	..	..	..	1	2	1	..	..	2	3	..	5	..	..	..	..	4	1	..	..	2	..	..	..	..	1	..	1	1	..	..	..
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
135. Diseases of the prostate	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
VIII.—The Puerperal State.																																								
Group Total	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
146. Puerperal sepsis	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
157. Diseases of the joints (tuberculosis and rheumatism excepted)	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..

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CAUSES OF DEATH IN THE CITY OF SAULT STE. MARIE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	265	70	4	5	5	20	4	9	21	22	27	12	30	17	13	1		148	117		183	30	37	15	149	82	27		7	25	32	35	14	26	23	16	24	26	13	13	18
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	46	3	2	3	3	2	8	1	4	8	6	3	1	2	..	..	..	28	18	...	37	2	4	3	30	13	..	..	3	7	5	6	3	3	2	1	2	4	4	5	4
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..
7. Measles	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	3	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	2	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
9. Whooping cough	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
10. Diphtheria	16	..	1	3	1	2	6	..	1	..	1	1	..	..	..	..	..	11	5	..	15	..	..	1	14	2	..	..	..	1	3	3	..	..	..	..	..	4	3	..	2
11B. Influenza without pneumonic complications specified	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
16C. Dysentery due to other causes or of unspecified origin	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
24. Meningococcal meningitis	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
25. Purulent infection, septicaemia	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..
30. Mycoses	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	13	..	..	..	..	..	..	1	..	5	4	1	1	1	..	..	..	7	6	...	9	...	4	...	6	6	..	..	1	3	1	..	1	2	..	1	..	..	1	2	2
32. Tuberculosis of the meninges and central nervous system generally	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	...	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	15	..	..	..	..	..	..	1	2	5	4	1	1	1	..	..	..	8	7	...	11	...	4	...	7	7	..	..	1	3	1	1	1	2	1	1	..	..	1	2	2
38E. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	...	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
II.—General Diseases.																																								
Group Total	17	..	..	..	..	..	..	1	..	..	2	1	3	8	2	..	..	4	13	...	7	7	3	...	3	10	3	...	1	..	4	..	..	1	4	1	1	1	2	1	2
44. Malignant tumors of the stomach and liver	6	..	..	..	..	..	..	..	..	..	..	..	1	4	1	..	..	3	3	...	2	3	1	...	1	4	1	...	..	..	2	..	..	..	..	2	1	..	1	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	...	..	..	1	...	..	1	..	...	..	..	1	..	..	..	..	..	..	..	..	..	..

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SAULT STE. MARIE—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
101A. Pneumonia, lobar	1											1						1					1			1											1			
101B. Pneumonia, not otherwise defined	8	1				1			1	1	1		1	1	1			2	6		6		2		3	4	1			2	3	2		1						
103. Congestion and haemorrhagic infarct of the lung	1															1		1			1					1							1							
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A and 107B	1						1												1		1				1								1							
VI.—Diseases of the Digestive System.																																									
Group Total	33	15		1	1		2		1	4	1	1	1	2	2	2		20	13		25	2	5	1	24	5	4			4	4	1	4	2	3	6	7	1		1
111A. Ulcer of the stomach	3									2	1							2	1		2		1		2	1						1			1	1				
111B. Ulcer of the duodenum	1														1			1						1	1												1			
112. Other diseases of the stomach (cancer excepted)	1															1			1			1				1													1	
113. Diarrhoea and enteritis (under 2 years)	11	11																7	4		11				11							1	1		2		3	4			
114. Diarrhoea and enteritis (over 2 years)	2			1											1			2			2				1	1							1			1				
117. Appendicitis and typhlitis	5				1		1			2		1						4	1		3		2		4	1				3			1				1			
118A. Hernia	2	1												1				1	1		1		1		1		1								1	1				
118B. Intestinal obstruction	3	3																2	1		3				3					1	1					1			
124. Other diseases of the liver	3												1	1		1			3		1	1	1			1	2						2			1			
126. Peritonitis of unstated origin	2						1		1									1	1		2				1	1						1							
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	15	1					2			1	1	4	1	1	2	1	1	11	4		8	4	2	1	7	6	2					1	3	1	1	1	2	2		1	3
128. Acute nephritis	4	1					2			1								2	2		2		1	1	3	1							1						1	2
129. Chronic nephritis (Bright's disease)	9										1	3	1	1	2		1	8	1		4	4	1		4	4	1					1	3		1	1	1	1			1
133. Diseases of the bladder	1															1		1			1					1										1				
137. Cysts and other benign tumors of the ovary	1											1							1		1					1											1			
VII.—The Puerperal State.																																								
Group Total	6								2	2	2								6		3	2	1			5	1			1		1	1				2			1
143C. Other accidents of pregnancy	2									1	1								2		1	1				1	1					1	1							
145C. Other accidents of labor	1								1										1		1					1				1										
146. Puerperal sepsis	1									1									1				1			1														1
148. Puerperal albuminuria and convulsions	1								1										1		1					1											1			
149. Childbirth (without other explanation)	1										1								1			1				1											1			

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SAULT STE. MARIE Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Other forms of crushing (vehicles, railways, landslides, etc.)	3											2		1				2	1			1	2		1	1	1				1						1	1			
188c. Automobile accidents	1													1					1			1					1										1				
188f. Other accidental injuries by crushing, etc	2											2						2					2		1	1				1							1				
189. Injury by animals (poisoning excepted)	1											1						1					1			1				1										
194. Excessive Heat	1											1						1					1						1					1						
201c. Fracture (cause not specified)	3									2	1							3					2	1	3					1	1			1						
202. Other external violence	1											1						1			1					1					1									
XV.—Ill-Defined Diseases.																																								
Group Total	7	1									1	2	1		1	1		4	3		6		1		1	6				1	2	2	1							1
204. Sudden death	1														1				1		1					1					1									
205a. Cause of death unstated or ill-defined	6	1									1	2	1			1		4	2		5		1		1	5				1	1	2	1							1

CAUSES OF DEATH IN THE CITY OF STRATFORD, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	231	38	4		1	3	6	5	1	14	15	14	16	41	44	29		109	122		160	62	5	4	94	94	43			20	19	19	19	30	14	15	20	18	18	18	21
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	19	3	1	..	..	..	3	1	..	6	1	2	2	..	..	..	..	5	14	..	16	3	..	..	11	8	..	..	..	3	1	1	1	3	1	1	1	2	3	1	1
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
10. Diphtheria	3	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3	..	2	1	..	..	3	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	2	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
23. Encephalitis lethargica	2	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	1	1	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	..	..	5	..	1	2	..	..	..	..	1	7	..	7	1	..	..	2	6	..	..	..	2	1	..	..	1	1	..	..	1	1	..	1
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Total deaths from tuberculosis	9	..	..	..	..	..	..	..	..	5	1	1	2	..	..	..	..	1	8	..	8	1	..	..	3	6	..	..	..	2	1	..	..	1	1	..	..	1	1	1	1
42. Other endemic, epidemic or infectious diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	44	..	..	..	..	1	1	..	1	..	4	3	6	11	15	2	..	20	24	..	31	12	..	1	12	22	10	..	..	2	1	3	4	6	1	7	2	2	6	4	6
43. Malignant tumors of the buccal cavity	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
44. Malignant tumors, stomach and liver	15	..	..	..	..	..	..	..	..	..	..	1	2	6	6	..	..	10	5	..	9	5	..	1	2	9	4	..	..	1	1	2	1	1	..	2	1	1	2	1	2
45. Malignant tumors, peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
46. Malignant tumors, female genital organs	4	..	..	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	4	..	4	..	..	..	..	3	1	..	..	..	..	..	..	1	..	..	..	..	1	1	1
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
49. Malignant tumors of other or unspecified organs	4	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	1	3	..	4	..	..	..	1	1	2	..	..	..	..	..	1	..	1	..	..	..	1	1	..
Total deaths from cancer	26	..	..	..	..	..	..	..	..	..	..	3	4	8	10	1	..	13	13	..	18	7	..	1	3	15	8	..	..	1	1	2	2	3	1	2	1	1	5	3	4

STRATFORD—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
51. Rheumatic fever	2								1				1					1	1		2				1	1				1					1					
52. Chronic rheumatism, osteo-arthritis, gout	1													1					1		1				1										1					
57. Diabetes	3										1				2			2	1		2	1				2	1												1	2
58A. Pernicious anaemia	5										1		1	2	1			3	2		3	2			3	2							2			1	1	1		
58B. Other anaemias and chlorosis	3						1								1	1		1	2		2	1			1	2							1		2					
60A. Exophthalmic goitre	2										2								2		2				2							1								
60B. Other diseases of the thyroid gland	1														1				1			1					1					1							
69. Other general diseases	1					1													1		1				1										1					
III.—Diseases of the Nervous System.																																									
Group Total	30	5						1				3	3	9	6	3		16	14		24	6			13	11	6			2	3	4	2	5	2	1	2	3	3	1	2
70. Encephalitis	1													1					1		1						1							1						
71A. Meningitis	3	1										1				1		1	2		2	1			2	1								1				1		1
71B. Cerebrospinal meningitis	3	2						1										2	1		3				3					1		1		1						
73. Other diseases of the spinal cord	5											1		2	2			3	2		4	1				3	2								1		2			
74A. Cerebral haemorrhage, apoplexy	11												2	5	2	2		6	5		9	2			4	5	2				1	2		2	2		1		1		2
75B. Other forms of paralysis	3											1		1	1			2	1		3				2	1				2								1		
80. Infantile convulsions (under 5 years of age)	2	2																2			2				2					1						1				
83. Cerebral softening	2													1	1				2			2				1	1							1			1			
IV.—Diseases of the Circulatory System.																																								
Group Total	34									3	1	2	2	8	12	6		15	19		17	16	1		4	23	7			1	3	5	3	5	2	3	3	3		5	1
89. Angina pectoris	2													1	1			2				2				1	1						1	1						
90. Other diseases of the heart	22									1		2	2	5	9	3		8	14		13	8	1		2	16	4			1	3	3	3	3	1		2	3		3	
91B. Arteriosclerosis	7													2	2	3		3	4		2	5			1	4	2					1		1		2	1		1	1
93. Embolism and thrombosis (not cerebral)	1										1							1				1			1							1								
96. Haemorrhage without determined cause; other diseases of the circulatory system	2									2								1	1		2					2									1			1		
V.—Diseases of the Respiratory System.																																								
Group Total	17	2	2							1	1			5	5	1		6	11		13	3	1		5	7	5			4	5		1			1		2	4
99C. Bronchitis, not otherwise defined, under 5 years of age	1	1																1			1				1						1								
99D. Bronchitis, not otherwise defined, over 5 years of age	2													1	1				2		1	1				1	1			2									1
100A. Broncho-pneumonia	1															1			1				1				1											1		
101A. Pneumonia, lobar	1													1				1			1						1											1		
101B. Pneumonia, not otherwise defined	8	1	1							1	1			2	2			2	6		8				3	4	1						1					1	3	

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STRATFORD—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XI.—Malformations.																																									
Group Total	1	1																	1		1				1					1											
159A. Congenital malformations not otherwise specified (still-births excepted)	1	1																	1		1				1					1											
XII.—Diseases of Early Infancy.																																									
Group Total	17	17																10	7		17				17					4	1		2	2	1	2	2		1	2	
160B. Congenital debility, icterus and scleroma	8	8																4	4		8				8					2	1			1		2	1		1	
161A. Premature birth	6	6																3	3		6				6					1				1	1		1	1	1	
161B. Injury at birth	2	2																2			2				2								2								
162. Other diseases peculiar to early infancy	1	1																1			1				1					1											
164. XIII.—Old Age.																																								
Group Total	14														5	9		7	7		5	8		1	3	2	9			1	1		3		3		2		1		3
XIV.—External Causes.																																									
Group Total	10						1	2		1	2	1		1		2		8	2		6	3		1	6	4							1	2		1	3	2	1		
177. Other acute accidental poisonings	1											1						1			1				1											1				
185. Accidental injury by fall	2							1			1							2			1			1	1	1									1	1				
Other forms of crushing (vehicles, railways, landslides, etc.)	3							1			1		1					3			3				1	2							1				1	1		
188A. Railroad accidents	1										1							1			1					1							1							
188C. Automobile accidents	2							1					1					2			2				1	1											1	1		
189. Injury by animals (poisoning excepted)	1						1												1		1				1										1				
196. Electricity (lightning excepted)	1									1								1				1			1									1					
201C. Fracture (cause not specified)	2														2			1	1			2			1	1							1			1			
XV.—Ill-Defined Diseases.																																									
Group Total	4	1			1						1				1			1	3		3	1			3	1							1			1				2
205A. Cause of death unstated or ill-defined	4	1			1						1				1			1	3		3	1			3	1							1			1				2

CAUSES OF DEATH IN THE CITY OF TORONTO, 1921.

OFFICIAL ENGLISH TRANSLATION. DISEASES AND CAUSES OF DEATH.	Total.	Ages.																Sex.			Nativity.				Social Condition.					Months.											
		Under 1.	1	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British Born	Foreign Born	Not stated.	Single.	Married.	Widower	Divorced	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
		0	1																																					
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**5884**	**1210**	**154**	**75**	**41**	**56**	**160**	**69**	**99**	**285**	**496**	**536**	**627**	**832**	**772**	**469**	**3**	**3008**	**2876**		**3634**	**1717**	**404**	**129**	**2596**	**2207**	**1034**		**47**	**591**	**527**	**631**	**497**	**499**	**382**	**474**	**436**	**479**	**441**	**442**	**485**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	650	103	36	36	15	20	57	16	20	77	98	71	42	35	17	7	..	351	299	..	432	138	63	17	403	211	33	...	3	67	80	84	57	58	48	40	42	44	38	44	48
1a. Typhoid fever	16	..	..	..	..	..	..	..	2	7	6	..	..	1	..	..	..	13	3	..	8	3	4	1	10	6	..	..	..	1	1	2	2	1	..	..	3	2	2	1	1
7. Measles	7	3	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	6	..	..	1	7	..	..	..	..	1	1	..	..	..	..	..	..	1	1	..	3
8. Scarlet fever	27	..	2	3	3	5	6	1	..	2	3	1	1	..	..	..	..	14	13	..	22	5	..	..	20	7	..	..	..	3	6	5	3	3	1	2	..	..	2	1	1
9. Whooping cough	54	33	9	6	2	3	1	..	..	..	..	..	..	..	..	..	..	25	29	..	49	2	..	3	54	..	..	..	..	7	6	13	2	7	3	2	9	3	1	..	1
10. Diphtheria	98	8	9	19	7	7	33	9	1	1	3	1	..	..	..	..	..	65	33	..	90	8	..	..	93	5	..	..	..	17	14	16	8	5	5	7	3	2	8	8	5
11a. Influenza, with pneumonic complications specified	35	1	1	1	..	..	3	..	..	3	6	5	3	3	9	..	..	16	19	..	22	11	1	1	8	17	10	..	..	1	6	9	8	3	1	..	1	..	..	2	4
11b. Influenza, without pneumonic complications specified	34	6	1	..	..	1	3	2	1	..	3	4	2	4	3	4	..	13	21	..	21	10	2	1	19	11	4	..	..	4	3	6	6	1	2	1	..	..	2	6	3
16c. Dysentery, due to other causes or of unspecified origin	15	7	2	..	..	..	1	..	..	..	1	..	3	..	..	1	..	10	5	..	12	2	1	..	11	4	..	..	..	..	..	..	..	..	..	1	4	9	..	..	1
21. Erysipelas	28	12	1	..	..	..	..	..	..	1	3	4	1	2	2	2	..	10	18	..	18	10	..	..	16	9	3	..	..	3	2	3	3	2	5	2	..	1	2	..	5
23. Encephalitis lethargica	16	..	..	..	..	1	2	1	..	2	4	3	1	2	..	..	..	6	10	..	10	2	4	..	6	9	1	..	..	3	2	2	2	1	1	..	..	1	1	3	..
25. Purulent infection, septicaemia	50	9	2	..	..	..	3	..	1	6	10	8	7	3	1	..	..	25	25	..	33	12	5	..	22	25	3	..	..	9	4	3	2	3	7	2	3	4	3	7	3
29. Tetanus	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
31. Tuberculosis of the respiratory system	169	..	..	..	..	1	2	..	10	47	42	32	20	13	2	..	..	86	83	..	79	49	35	6	64	96	6	..	3	12	23	18	16	21	16	15	12	9	6	10	11
32. Tuberculosis, meninges and central nervous system generally	22	5	3	2	2	2	2	..	2	1	3	..	..	..	..	..	..	11	11	..	17	3	1	1	19	2	1	..	..	3	1	1	1	2	1	3	2	5	..	1	2
33. Tuberculosis of the intestines and peritoneum	7	1	..	..	..	..	1	..	..	..	2	3	..	..	..	..	..	3	4	..	4	2	1	..	6	1	..	..	..	1	..	..	..	1	..	1	..	3	..	..	1
34. Tuberculosis of the vertebral column	7	..	..	1	1	..	..	..	..	4	1	..	..	..	..	..	..	4	3	..	3	2	1	..	5	2	..	..	..	..	1	2	..	1	1	..	..	..	2	..	..
35. Tuberculosis of the joints	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
36b. Tuberculosis of the genito-urinary system	5	..	..	..	..	..	..	..	1	..	..	2	..	2	..	..	..	4	1	..	2	2	1	..	2	2	1	..	..	..	1	..	..	1	..	..	..	..	1	..	2
36c. Tuberculosis of the organs other than the above	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	..	..	2	..	..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..
37a. Disseminated tuberculosis, acute	12	3	3	1	..	..	..	..	2	..	1	2	..	..	..	..	..	9	3	..	10	..	1	1	12	..	..	..	..	1	3	2	1	1	..	1	..	..	1	2
Total deaths from tuberculosis	226	9	6	4	3	3	5	3	13	55	51	37	20	15	2	..	..	119	107	..	117	60	40	9	110	105	8	..	3	17	29	23	19	28	18	21	14	17	9	12	19

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
38A. Syphilis, tertiary	2											2						2				1		1	1	1								1				1			
38D. Syphilis, hereditary	12	11		1														8	4		12				12					1			1		1	1	2	1	3	2
38E. Syphilis, stage not indicated	23	1							1		7	6	3	5				16	7		7	11	5		9	11	3			1	2	1	2	3	3	1	3	2		1	
40. Gonococcal infection (opthalmia excepted)	2										1		1						2				1	1		1	1				1						1				
41. Gonorrhoeal or purulent ophthalmia	2	2																2			2				2					1											
42. Other endemic, epidemic or infectious diseases	2	1		1														1	1		2				2					1	1										
II.—General Diseases.																																									
Group Total	809	10	2	4	1	6	11	15	8	21	67	123	176	214	116	35		365	444		434	295	67	13	190	440	173		6	82	70	74	55	67	64	63	72	59	62	71	70
43. Malignant tumors of the buccal cavity	21										2	2	2	7	6	2		19	2		14	3	3	1	6	11	4			2	1			3		2	2	4	1	1	5
44. Malignant tumors of the stomach and liver	150										5	19	42	46	21	17		88	62		70	59	18	3	25	83	42			15	14	15	12	10	9	14	16	12	12	14	7
45. Malignant tumors of the peritoneum, intestines and rectum	99									2	10	14	22	34	15	2		47	52		51	38	5	5	14	67	17		1	5	5	11	11	9	7	8	14	4	8	10	7
46. Malignant tumors of the female genital organs	54									1	7	12	13	16	5				54		26	21	5	2	8	35	11			7	6	4		2	8	5	2	7	4	7	2
47. Malignant tumors of the breast	53									1	1	18	11	15	7				53		32	18	3		13	25	14		1	6	7	7	3	3	3	1	5	4	2	6	6
48. Malignant tumors of the skin	10											2	2	4	1	1		5	5		6	3	1		2	3	5					1	1	2	3			2		1
49. Malignant tumors of other or unspecified organs	152				1	1	1			5	13	23	36	44	21	7		93	59		71	65	15	1	28	88	35		1	17	11	9	6	10	16	11	17	9	12	14	20
Total deaths from cancer	538				1	1	1			9	38	90	27	166	76	29		252	286		270	207	49	12	96	311	128		3	52	44	46	33	38	45	43	56	40	41	52	48
50. Benign tumors, and tumors not returned as malignant (tumors of the female genital organs excepted)	8									2		1	2	2	1			2	6		4	4			3	5				2	1	1	1	1		1			1	
51. Rheumatic fever	35					2	3	8	5	1	2	2	5	3	2	2		13	22		22	12	1		20	11	4			5	4	5	2	4	8			3	2	2	
52. Chronic rheumatism, osteo-arthritis, gout	17							3		1		1	2	4	4	2		6	11		10	6	1		6	6	5			1	1	2	3	3		3		1	1		2
54. Pellagra	3											1	1	1				1	2		1	2			1	1	1												1		1
56. Rickets	1	1																1			1				1																1
57. Diabetes	55					1	1	2	3	3	7	6	12	12	8			23	32		27	20	8		14	31	10			6	4	5	6	3	3	4	6	2	5	8	3
58A. Pernicious anaemia	62										4	8	18	14	16	2		24	38		42	18	2		7	36	18		1	6	9	4	3	7	2	5	5	6	6	3
58B. Other anaemias and chlorosis	13		1			1				1	2		2	2	4			3	10		9	4			5	6	1		1	4	1	2				1	1	3			3
60A. Exophthalmic goitre	9										2	6		1				1	8		5	3	1		2	6	1					2	2	1	1	2			1		
60B. Other diseases of the thyroid gland	11									1	3		3	2	2			3	8		7	4			2	6	3			2	1	3		2	1	1		1			
62. Diseases of the thymus	1	1																1			1				1													1			
63. Diseases of the adrenals	4										1	1		1	1				4		2	2			1	3				1	1		1					1			
64. Diseases of the spleen	5						3				1	1						4	1		4	1			5									2	1			1		1	
65A. Leukaemia	12	1	1	1			1			1	3			3	1			9	3		7	4	1		6	4	1		1		1		1			2	2			2	4
65B. Lymphadenoma (Hodgkin's disease)	2										1			1				2			1	1				2								1							1
66. Alcoholism (acute or chronic)	10											6	3	1				10			4	4	1	1	3	6	1			2		1	3	2				1		1	
69. Other general diseases	22	7		3		2	1	2		2	3				1	1		10	12		17	3	2		17	4				3	2	5		4	1		1	2	2		2

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
V.—Diseases of the Respiratory System.																																									
Group Total	765	138	49	8	8	7	7	2	13	36	50	66	68	112	120	81	..	387	378	..	447	254	52	12	328	269	163	5	..	97	88	130	97	75	40	26	28	31	40	48	65
97. Diseases of the nasal fossae and of their annexa	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..
98. Diseases of the larynx	8	1	..	1	1	2	..	..	1	1	..	..	1	..	..	..	..	2	6	..	5	3	..	..	6	2	..	..	..	1	2	..	2	..	..	..	1	..	..	1	1
99A. Bronchitis, acute	24	5	4	1	..	..	..	..	..	..	..	1	1	3	6	3	..	9	15	..	14	9	..	1	11	5	7	1	..	2	4	4	4	1	..	1	..	2	3	2	1
99B. Bronchitis, chronic	21	..	..	..	..	..	..	..	..	..	..	1	1	4	12	3	..	8	13	..	6	13	2	..	4	8	9	..	..	4	1	2	2	2	2	3	1	..	1	2	1
99C. Bronchitis not otherwise defined under 5 years of age	20	16	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	11	9	..	20	..	..	..	20	..	..	..	..	1	5	5	1	3	1	2	..	2	..	..	..
99D. Bronchitis not otherwise defined over 5 years of age	22	..	..	..	..	..	..	..	..	..	1	1	3	6	6	5	..	5	17	..	8	12	2	..	4	9	9	..	..	1	2	5	3	1	2	..	4	..	1	1	2
100A. Broncho-pneumonia	195	78	32	3	2	1	3	..	2	6	4	9	6	21	16	12	..	97	98	..	141	39	11	4	132	34	29	..	..	23	27	39	17	16	10	7	6	12	7	14	17
100B. Capillary bronchitis	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	1
101A. Pneumonia, lobar	135	6	5	1	..	2	2	..	7	8	21	17	24	18	14	10	..	80	55	..	70	50	13	2	48	64	23	..	..	20	12	29	15	9	7	1	6	3	11	15	7
101B. Pneumonia not otherwise defined	253	27	6	2	3	..	1	1	2	14	19	28	22	45	46	37	..	131	122	..	141	89	19	4	83	101	66	3	..	32	32	36	49	30	10	7	7	7	10	12	21
102. Pleurisy	31	..	..	..	1	1	1	1	1	5	2	7	4	3	3	2	..	18	13	..	15	14	2	..	9	18	4	..	..	4	..	5	1	5	5	4	..	2	2	..	3
103. Congestion and haemorrhagic infarct of the lung	10	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4	2	4	6	..	5	4	1	..	1	6	2	1	..	3	1	..	1	2	..	..	..	2	..	..	..	1
105. Asthma	32	..	..	..	..	..	..	..	..	1	2	2	2	10	8	7	..	14	18	..	13	17	1	1	3	18	11	..	..	4	2	5	2	5	..	..	1	2	3	1	7
106. Pulmonary emphysema	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2
107C. Other diseases of the respiratory system (tuberculosis excepted) not included in 107A or 107B	6	..	..	..	..	..	..	..	..	1	..	..	2	..	3	..	..	4	2	..	3	2	1	..	1	3	2	..	..	1	..	..	..	..	2	1	..	1	..	..	1
VI.—Diseases of the Digestive System.																																								
Group Total	629	250	38	11	7	10	22	6	8	27	45	36	53	44	41	30	1	333	296	..	459	116	39	15	406	163	55	5	..	38	32	44	39	36	50	56	107	114	57	30	26
108A. Diseases of the teeth and gums	6	3	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	3	3	..	5	1	..	..	4	2	..	..	..	..	1	2	..	1	..	..	1	1	..	..	..
108B. Other diseases of the buccal cavity and its annexa	5	..	..	..	1	..	1	..	1	..	..	..	1	..	1	..	..	1	4	..	3	1	1	..	4	..	1	..	..	..	..	1	..	..	..	..	1	..	..	3	..
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	26	3	5	2	..	2	4	..	..	4	2	2	1	..	1	..	..	15	11	..	17	5	2	2	22	4	..	..	..	..	1	5	1	2	1	2	3	5	1	2	3
110. Diseases of the oesophagus	4	1	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	2	2	..	2	2	..	..	2	1	1	..	..	..	..	1	..	..	1	1	..	1	..	..	..
111A. Ulcer of the stomach	21	..	..	..	..	..	..	..	..	..	3	5	6	4	2	..	1	11	10	..	12	7	2	..	4	12	4	1	..	3	2	1	..	2	4	1	..	3	1	2	2
111B. Ulcer of the duodenum	10	..	..	..	..	..	..	..	..	..	4	1	3	..	2	..	..	8	2	..	5	3	1	1	3	6	1	..	..	..	..	1	..	2	2	1	..	2	..	..	2
112. Other diseases of the stomach (cancer excepted)	43	4	..	..	..	2	1	..	1	1	5	3	7	5	7	7	..	25	18	..	18	17	7	1	15	17	10	1	..	4	2	5	4	..	5	4	6	4	3	3	3
113. Diarrhoea and enteritis (under 2 years)	249	218	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	148	101	..	239	3	1	6	249	..	..	..	..	7	4	5	7	14	13	19	70	71	29	7	3
114. Diarrhoea and enteritis (over 2 years)	32	..	..	5	2	3	6	..	..	1	..	2	..	2	6	5	..	11	21	..	25	6	1	..	17	8	7	..	..	..	2	..	2	1	3	1	9	9	2	1	2
117. Appendicitis and typhlitis	58	1	..	1	1	2	4	4	3	13	10	6	8	4	1	..	..	34	24	..	36	15	7	..	27	28	1	2	..	5	3	5	6	3	5	7	7	4	8	3	2
118A. Hernia	12	2	..	..	..	..	..	..	..	..	2	..	3	2	1	2	..	8	4	..	5	5	1	1	4	5	3	..	..	1	1	1	1	1	2	3	..	..	1	..	1

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Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	23	34	35	36	37	38	30	40	41
148. Puerperal albuminuria and convulsions	12	.	.	.	.	.	.	.	2	3	4	3	.	.	.	.	.	.	12	.	6	2	4	.	1	11	.	.	.	2	1	.	1	2	1	1	.	.	.	2	2
149. Childbirth (without other explanation)	5	.	.	.	.	.	.	.	.	3	.	2	.	.	.	.	.	.	5	.	5	.	.	.	.	5	.	.	.	2	.	.	1	.	2	.	.	.	.	.	.
IX.—Diseases of the Skin and Cellular Tissue.																																								
Group Total	31	6	1	.	1	.	.	.	3	1	4	4	1	2	5	3	.	18	13	.	19	7	4	1	14	13	4	.	.	2	4	2	2	4	4	3	2	3	2	2	1
151. Gangrene	11	.	.	.	.	.	.	.	.	.	2	1	.	1	4	3	.	5	6	.	5	4	2	.	1	6	4	.	.	1	.	2	2	1	2	.	.	1	1	.	1
152. Furuncle	4	1	.	.	.	.	.	.	1	.	.	1	1	.	.	.	.	3	1	.	4	.	.	.	3	1	.	.	.	.	1	.	.	.	1	1	.	.	.	.	.
153. Phlegmon, acute abscess	9	2	.	.	.	.	.	.	2	1	1	2	.	.	1	.	.	6	3	.	5	1	2	1	5	4	.	.	.	.	1	.	.	3	1	.	1	.	1	2	.
155. Other diseases of the skin and its annexa	7	3	1	.	1	.	.	.	.	.	1	.	.	.	1	.	.	4	3	.	5	2	.	.	5	2	.	.	.	1	2	.	.	.	1	.	.	1	.	.	.
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	16	2	1	.	1	.	2	2	2	1	1	1	1	.	1	1	.	9	7	.	11	2	2	1	12	4	.	.	.	1	2	2	2	.	2	1	1	2	.	1	2
156. Diseases of the bones (tuberculosis and rickets excepted)	9	.	.	1	.	.	.	1	2	2	.	1	1	.	.	1	.	6	3	.	6	2	1	.	7	2	.	.	.	1	2	.	.	1	.	1	1	.	1	.	1	1
157. Tuberculosis of the joints (tuberculosis and rheumatism excepted)	4	2	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	2	2	.	3	.	.	1	.	3	1	.	.	.	.	.	.	2	1	.	.	1	.	.	.	.
158. Other diseases of the organs of locomotion	3	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	1	2	.	2	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	1
XI.—Malformations.																																								
Group Total	83	81	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	54	29	.	82	.	1	.	83	.	.	.	.	9	7	6	10	4	4	8	4	7	2	10	12
159A. Congenital malformations not otherwise specified (still-births excepted)	42	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	28	14	.	42	.	.	.	42	.	.	.	.	3	4	2	4	3	2	5	2	4	.	6	7
159B. Hydrocephalus	8	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	3	.	8	.	.	.	8	.	.	.	.	3	.	2	.	.	.	1	.	.	1	1	.
159C. Congenital malformations of the heart	33	32	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	21	12	.	32	.	1	.	33	.	.	.	.	3	3	2	6	1	2	2	2	3	1	3	5
XII.—Diseases of Early Infancy.																																								
Group Total	520	520	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	310	210	.	513	.	.	7	520	.	.	.	.	46	43	54	41	27	25	51	34	51	53	49	46
160B. Congenital debility, icterus and scleroma	182	182	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	114	68	.	177	.	.	5	182	.	.	.	.	19	14	10	12	9	11	18	14	26	23	11	15
161A. Premature birth	247	247	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	142	105	.	245	.	.	2	247	.	.	.	.	21	19	33	16	11	9	27	15	18	24	33	21
161B. Injury at birth	47	47	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	31	16	.	47	.	.	.	47	.	.	.	.	5	4	4	9	5	3	2	2	3	3	2	5
162. Other diseases peculiar to early infancy	44	44	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	23	21	.	44	.	.	.	44	.	.	.	.	1	6	7	4	2	2	4	3	4	3	3	5

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CAUSES OF DEATH IN THE CITY OF WELLAND, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**112**	**24**	**3**		**1**		**3**	**2**	**4**	**3**	**10**	**12**	**12**	**17**	**13**	**7**	**1**	**67**	**45**		**75**	**13**	**20**	**4**	**51**	**48**	**13**			**12**	**11**	**9**	**6**	**10**	**9**	**7**	**11**	**7**	**12**	**7**	**11**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	13	2	2	..	..	..	2	..	1	1	1	1	1	2	..	..	..	6	7	...	10	1	2	...	7	5	1	..	..	2	2	3	..	1	..	1	1	..	2	..	1
1A. Typhoid fever	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	3	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	2	1	..	2	..	1	..	2	1	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..
11A. Influenza, with pneumonic complications specified	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
21. Erysipelas	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	3	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	3	..	3	..	..	..	1	1	1	..	..	..	1	1	..	..	..	..	..	..	1	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
36D. Tuberculosis of the genito-urinary system	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Total deaths from tuberculosis	5	..	..	..	..	..	..	..	1	..	1	1	1	1	..	..	..	1	4	..	3	1	1	..	1	3	1	..	..	..	1	1	..	..	..	1	..	..	1	..	1
II.—General Diseases.																																								
Group Total	20	2	1	..	..	..	..	..	..	..	..	4	2	7	4	..	..	8	12	...	13	3	3	1	5	10	5	..	..	..	3	2	2	1	2	3	2	1	2	1	1
44. Malignant tumors, stomach and liver	5	..	..	..	..	..	..	..	..	..	..	2	..	1	2	..	..	2	3	..	2	..	3	..	1	3	1	..	..	..	1	..	..	..	..	2	..	1	1	..	..
46. Malignant tumors, female genital organs	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Total deaths from cancer	8	..	..	..	..	..	..	..	..	..	..	3	1	2	2	..	..	2	6	..	4	1	3	..	2	5	1	..	..	..	2	1	..	..	..	2	..	1	1	1	..
56. Rickets	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
57. Diabetes	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	1	2	..	3	..	..	..	..	1	2	..	..	..	1	..	..	..	1	..	..	..	1	..	..
58A. Pernicious anaemia	5	..	1	..	..	..	..	..	..	..	..	1	1	..	2	..	..	2	3	..	3	2	..	..	1	2	2	..	..	..	1	..	1	1	1	..	..	..	..	..	1

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WELLAND—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																									
Group Total	4										1	1		2				2	2		1	1	2		1	2	1							2					1	1	
129. Chronic nephritis (Bright's disease)	2													2				2					2			1	1											1	1	
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1											1							1			1			1								1							
137. Cysts and other benign tumors of the ovary	1										1								1		1					1														
VIII.—The Puerperal State.																																								
Group Total	1										1								1				1			1													1		
143c. Other accidents of pregnancy	1										1								1				1			1													1		
XI.—Malformations.																																								
Group Total	1	1																1			1				1					1										
159c. Congenital malformations of the heart	1	1																1			1				1					1										
XII.—Diseases of Early Infancy.																																								
Group Total	11	11																8	3		11				11					2	1					3	1		1	3
160b. Congenital debility, icterus and scleroma	3	3																1	2		3				3						1					1	1			
161a. Premature birth	6	6																5	1		6				6					1						2			1	2
161b. Injury at birth	2	2																2			2				2					1										1
164. XIII.—Old Age.																																								
Group Total	4														1	3		2	2		3		1		3		1						1					1		2

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	465	111	20	7	8	3	14	8	9	32	42	43	44	60	37	26	1	238	227		342	62	53	8	220	187	58			47	38	39	42	40	39	37	36	38	39	33	37
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	67	10	8	6	4	..	3	1	..	10	9	6	3	7	..	..	..	36	31	.	51	6	8	2	41	21	5	..	..	7	8	7	6	10	6	4	4	3	2	5	5
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
8. Scarlet fever	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
9. Whooping cough	7	3	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7	..	..	..	7	..	..	..	..	..	..	..	..	1	..	2	2	1	..	1	..
10. Diphtheria	12	1	..	3	3	..	3	..	..	2	..	..	..	..	..	..	..	7	5	..	10	2	..	..	10	2	..	..	..	2	3	1	1	1	..	1	1	1	..	1
11A. Influenza, with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	3	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	3	..	..	2	..	1	..	1	1	1	..	..	1	..	..	1	..	1	..	..	..	..	..	..
16C. Dysentery, due to other causes or of specified origin	4	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	1	..	3	..	1	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2
23. Encephalitis lethargica	2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	1	..	1	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
25. Purulent infection, septicaemia	3	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2	1	..	2	..	1	..	2	1	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	22	..	..	..	..	..	..	..	..	8	7	..	3	4	..	..	..	11	11	..	15	3	3	1	8	12	2	..	..	3	3	1	..	5	4	1	..	1	..	2	2
32. Tuberculosis, meninges and central nervous system generally	4	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4	..	..	..	4	..	..	..	..	..	..	..	1	..	1	1	..	..	..	1	..
33. Tuberculosis of the intestines and peritoneum	5	..	1	2	..	..	..	..	..	..	1	1	..	..	..	..	..	1	4	..	5	..	..	..	3	2	..	..	..	..	..	2	2	..	..	..	..	1	..	..	..
Total deaths from tuberculosis	31	2	3	2	..	..	..	..	..	8	8	1	3	4	..	..	..	14	17	..	24	3	3	1	15	14	2	..	..	3	3	4	2	6	5	1	..	1	1	3	2
38E. Syphilis, stage not indicated	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	..	1	..	1	..	..	1	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	57	1	..	..	..	1	1	1	1	2	7	11	14	14	2	2	..	27	30	..	39	13	4	1	9	38	10	..	..	4	4	8	5	7	2	7	3	2	2	7	6
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	..	..	1	1	..	..	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..
44. Malignant tumors, stomach and liver	11	..	..	..	..	..	..	..	..	..	1	1	3	5	1	..	..	7	4	..	5	4	2	..	..	10	1	..	..	..	..	..	3	3	2	1	..	..	..	1	1
45. Malignant tumors, peritoneum, intestines and rectum	5	..	..	..	..	..	..	..	..	..	..	1	..	3	..	1	..	4	1	..	5	..	..	..	1	2	2	..	..	..	1	..	..	..	..	1	..	..	..	2	1

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WINDSOR—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
99D. Bronchitis, not otherwise defined, over 5 years of age	1															1		1				1			1											1				
100A. Broncho-pneumonia	14	5	2			1	1						2	3				8	6		12	1	1		11	2	1			2	1	2	3	1		1			3	1
101A. Pneumonia, lobar	6			1							1	1	1	1	1			4	2		6				1	4	1			2	1	1	1					1		
101B. Pneumonia, not otherwise defined	19	5	1				1			2	1	1	3	4	1			10	9		16	1	2		7	10	2			3	4	2	2	1	1		1	1		4
103. Congestion and haemorrhagic infarct of the lung	3	1													1	1		2	1		3				1	1	1			1			2							
107C. Other diseases of the respiratory system (tuberculosis excepted) not cluded in 107A or 107B	1												1						1		1					1												1		
I.—Diseases of the Digestive System.																																								
Group Total	45	13	4		2		2	1	1	3	7	4	4	2	2			21	24		38	2	5		24	19	2			3	4	3	5	1	5	7	6	3	3		5
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	4				1					1	1		1					1	3		4				1	2	1			2			1					1		
111A. Ulcer of the stomach	3										1	1		1				3			1	1	1			3										2				1
111B. Ulcer of the duodenum	1										1							1			1					1								1						
112. Other diseases of the stomach (cancer excepted)	5	1			1					1	1		1					3	2		4		1		2	3						1		2		1	1			
113. Diarrhoea and enteritis (under 2 years)	15	12	3															7	8		15				15					1	1	1	3	1	1	2	2	1	1		1
117. Appendicitis and typhlitis	8						2	1	1	1	1	2						3	5				3		5	3						1				3	1		1		2
118B. Intestinal obstruction	4		1								2				1			2	2			1			1	2	1				1		1			1		1		
123. Biliary calculi	3												2	1				1	2		3					3					2					1				
124. Other diseases of the liver	1														1				1		1					1								1						
126. Peritonitis of unstated origin	1											1							1		1					1														1
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	26								2	3	1	4	4	6	4	2		12	14		13	8	4	1	5	16	5			2	3	1	2	1	1	1	2	3	6	2	2
128. Acute nephritis	2								1						1			1	1		2				1		1				1			1						
129. Chronic nephritis (Bright's disease)	14									1		4	3	3	1	2		6	8		7	4	2	1	3	8	3			2	2		1			2	2	2	2	1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	2											1	1						2		1		1			1	1							1			1			
135. Diseases of the prostate	5													3	2			5			1	4				5						1			1			2		1
137. Cysts and other benign tumors of the ovary	1								1										1		1				1													1		
141. Other diseases of the female genital organs	2									2									2		1		1			2					1								

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WINDSOR—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIV.—External Causes.																																									
Group Total	39	2	1	..	2	1	3	2	3	4	8	7	2	1	1	2	..	32	7	..	26	6	7	..	22	15	2	..	..	3	2	2	5	4	6	3	5	3	4	1	1
165. Suicide by solid or liquid poisons	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	..	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..
175. Poisoning by food	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
177. Other acute accidental poisonings	4	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	4	..	..	3	..	1	..	3	1	..	..	..	..	..	..	1	2	..	1	..	..	..	..	..
179. Burns (conflagration excepted)	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	1	..	..	2	..	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..
180. Accidental mechanical suffocation	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
182. Accidental drowning	4	..	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	4	..	..	2	1	1	..	3	1	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..
183. Accidental injury by firearms (war casualties excepted)	3	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	2	1	..	2	1	..	..	1	2	..	..	..	1	..	1	..	..	..	..	..	..	3	..	..
185. Accidental injury by fall	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other forms of crushing (vehicles, railways, landslides, etc.)	13	..	..	..	1	..	2	..	..	..	2	5	1	1	..	1	..	11	2	..	11	1	1	..	6	6	1	..	..	..	2	..	3	..	1	..	1	2	2	1	1
188A. Railroad accidents	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..
188B. Street car accidents	3	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	2	1	..	1	1	1	..	..	3	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..
188C. Automobile accidents	8	..	..	..	1	..	2	..	..	..	1	3	..	1	..	..	..	7	1	..	8	..	..	..	6	1	1	..	..	..	..	..	2	..	..	..	1	1	2	1	1
196. Electricity (lightning excepted)	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
201C. Fracture (cause not specified)	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..
202. Other external violence	5	..	..	..	1	..	1	1	..	1	1	..	..	..	..	..	..	4	1	..	4	..	1	..	3	2	..	..	..	..	..	..	..	..	2	1	2	..	..	..	..
XV.—Ill-Defined Diseases.																																									
Group Total	6	1	..	..	..	..	..	..	..	1	..	1	1	1	..	..	1	1	5	..	3	1	1	1	3	2	1	..	..	1	..	..	..	..	..	..	1	..	1	..	2
205A. Cause of death unstated or ill-defined	6	1	..	..	..	..	..	..	..	1	..	1	1	1	..	..	..	1	5	..	3	1	1	1	3	2	1	..	..	1	..	..	..	..	..	..	1	..	1	..	2

CAUSES OF DEATH IN THE CITY OF WOODSTOCK, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	149	29	3	1			3	1	2	8	8	8	16	22	24	24		82	67		116	28	3	2	52	66	31			11	15	10	8	16	10	8	16	16	7	16
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	11	3	..	1	..	..	1	..	..	2	..	1	..	..	2	1	..	7	4	..	10	1	..	..	7	4	..	..	..	..	3	..	..	1	1	..	1	1	1	1	2
8. Scarlet fever	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	..	..	..	3	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1
11A. Influenza, with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system		..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Total deaths from tuberculosis	3	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	2	1	..	3	..	..	..	2	1	..	..	..	..	1	..	..	..	..	..	..	..	1	1
II.—General Diseases.																																								
Group Total	22	..	..	..	..	..	..	..	..	..	1	3	4	6	5	3	..	9	13	..	16	6	..	..	2	11	9	..	..	1	3	1	1	4	4	..	2	3	1	2
44. Malignant tumors, stomach and liver	4	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	2	2	..	2	2	..	..	..	2	2	..	..	..	1	..	1	..	..	..	..	..	..	..	2
45. Malignant tumors, peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	1	1	..	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..
46. Malignant tumors, female genital organs	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
47. Malignant tumors, breast	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	5	..	..	..	..	..	..	..	..	..	..	1	1	..	1	2	..	3	2	..	4	1	..	..	1	1	3	..	..	1	2	..	..	..	..	..	1	1	..	..
Total deaths from cancer	13	..	..	..	..	..	..	..	..	..	1	3	4	3	2	..	..	5	8	..	8	5	..	..	2	4	7	..	..	1	3	..	1	1	2	..	1	2	..	2
51. Rheumatic fever	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
57. Diabetes	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
58A. Pernicious anaemia	4	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	2	1	..	3	1	..	..	..	3	1	..	..	..	..	..	1	1	..	..	..	1	..	..	..
58B. Other anaemias and chlorosis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
60B. Other diseases of the thyroid gland	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..

WOODSTOCK—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System.																																									
Group Total	16	2	1							4	1	1	2	3	2			8	8		16				8	5	3			1			3	3		1	1	2	2	1	2
71A. Meningitis	4	1	1							1			1					3	1		4				3	1								3							1
74A. Cerebral haemorrhage, apoplexy	5									1		1		2	1			2	3		5					3	2			1							1	1	1	1
75A. Hemiplegia	1													1					1		1						1								1					
75B. Other forms of paralysis	1														1				1		1				1												1			
78. Epilepsy	2									2								2			2				2								2							
79. Convulsions (non-puerperal; 5 years and over)	1												1					1			1					1									1				
80. Infantile convulsions (under 5 years of age)	1	1																	1		1				1												1		
82A. Hysteria and neuralgia	1										1								1		1				1							1							
IV.—Diseases of the Circulatory System.																																							
Group Total	29								1			3	3	6	8	8		22	7		19	7	1	2	3	19	7			2	2	4	1	3	1	2		3	4	2	5
88. Acute endocarditis and myocarditis	1											1						1			1					1					1								
89. Angina pectoris	2											1		1				2				1		1		2									1				1
90. Other diseases of the heart	15								1			1	2	3	5	2		10	5		11	3		1	2	8	5				2	3			1		1	3	1	4
91B. Arteriosclerosis	11												1	2	3	5		9	2		7	3	1		1	8	2			2			1	3	1		2	1	1	
V.—Diseases of the Respiratory System.																																							
Group Total	7	3	1											2	1			4	3		7				4	3				1		2		1			1	2			
98. Diseases of the larynx	1	1																	1		1				1							1								
99B. Bronchitis, chronic	1														1			1			1					1								1						
100A. Broncho-pneumonia	2													2					2		2					2				1		1								
101B. Pneumonia not otherwise defined	2	1	1															2			2				2											1	1			
103. Congestion and haemorrhagic infarct of the lung	1	1																1			1				1												1			
VI.—Diseases of the Digestive System.																																							
Group Total	16	3	1				1		1	1	1		2	3	1	2		8	8		14	2			7	6	3				2			1	4	2	1	3	2		1
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	2	1								1								1	1		2				1	1				1				1						
111A. Ulcer of the stomach	1												1					1			1					1												1		
112. Other diseases of the stomach (cancer excepted)	1													1				1				1					1							1						
113. Diarrhoea and enteritis (under 2 years)	2	2																1	1		2				2											1	1			
117. Appendicitis and typhlitis	3						1		1		1							2	1		3				2	1									2		1			

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WOODSTOCK—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XIV.—External Causes.																																									
Group Total	12	1					1			1	2		2	2	2	1		8	4		8	3	1		3	8	1			1	2		1	1	1	1	2		2		1
169. Suicide by drowning	1													1					1		1					1														
179. Burns (conflagration excepted)	1													1					1		1					1					1									
180. Accidental mechanical suffocation	1	1																	1		1				1					1										
183. Accidental injury by firearms (war casualties excepted)	1										1							1				1				1														
185. Accidental injury by fall	1															1		1				1				1				1										
187. Accidental injury by machinery	1														1			1					1		1															1
Other forms of crushing (vehicles, railways, landslides, etc.)	3						1				1		1					2	1		3				1	1	1								1	1				1
188A. Railroad accidents	2										1		1					2			2					1	1													
188C. Automobile accidents	1						1												1		1				1										1					1
199. Homicide by other means	1									1								1			1					1										1				
201C. Fracture (cause not specified)	1												1					1			1					1							1							
202. Other external violence	1														1			1				1				1												1		
XV.—Ill-Defined Diseases.																																								
Group Total	2	1											1					1	1		1	1			1		1								1					1
204. Sudden death	1												1					1				1					1													1
205A. Cause of death unstated or ill-defined	1	1																	1		1				1										1					

CAUSES OF DEATH IN THE TOWN OF BARRIE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	119	16	3				2			11	9	5	11	15	26	21		60	59		84	29	2	4	42	51	26			6	12	8	13	6	4	12	5	12	2	10	19
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	10	1	..	..	..	..	1	..	..	3	3	..	....	2	..	..	..	3	7	..	6	3	1	..	6	4	....	..	..	1	..	1	1	..	..	..	1	..	1	1	4
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
10. Diphtheria	1	..	..	..	..	..	1	..	..	..	..	..	....	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	..	..	3	3	..	....	2	..	..	..	2	6	..	4	3	1	..	4	4	..	..	..	1	..	1	1	..	..	..	1	..	1	1	2
Total deaths from tuberculosis	8	..	..	..	..	..	..	..	..	3	3	..	....	3	..	..	..	2	6	..	4	3	1	..	4	4	..	..	..	1	..	1	1	..	..	..	1	..	1	1	2
II.—General Diseases.																																								
Group Total	10	..	..	..	..	..	..	..	..	....	1	1	....	4	2	2	..	5	5	..	7	3	..	..	2	4	4	..	..	..	2	..	2	1	..	1	1	..	1	1	1
44. Malignant tumors of the stomach and liver	4	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	2	2	..	1	3	..	..	1	1	2	..	..	..	1	..	..	1	..	1	..	..	..	..	1
47. Malignant tumors of the breast	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	1	....	1	..	..	..	2	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..
Total deaths from cancer	7	..	..	..	..	..	..	..	..	..	..	1	....	3	1	2	..	4	3	..	4	3	..	..	1	3	3	..	..	..	1	..	1	1	..	1	1	..	1	..	1
52. Chronic rheumatism, osteo-arthritis, gout	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	1	..	2	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..
60A. Exophthalmic goitre	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
III.—Diseases of the Nervous System.																																								
Group Total	13	..	..	..	..	..	..	..	..	..	..	..	2	3	6	2	..	6	7	..	8	5	..	..	3	6	4	..	..	1	2	1	1	1	..	2	1	..	2	..	2
72. Tabes dorsalis (locomotor ataxy)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
73. Other diseases of the spinal cord	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
74A. Cerebral haemorrhage, apoplexy	7	..	..	..	..	..	..	..	..	..	..	..	2	2	3	..	..	2	5	..	4	3	..	..	2	3	2	..	..	..	1	1	..	1	..	..	1	..	2	..	1
75A. Hemiplegia	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
75B. Other forms of paralysis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
82B. Neuritis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..

BARRIE—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System																																									
Group Total	18									2	1		4	2	7	2		9	9		13	4		1	2	11	5			1	3	2	5			1		2		1	3
89. Angina pectoris	1													1				1			1					1						1								
90. Other diseases of the heart	12									1	1		4	1	3	2		7	5		9	2		1	2	7	3			1	2	1	3			1		1			3
91B. Arteriosclerosis	4														4			2	2		2	2				2	2				1	1	1					1			
93. Embolism and thrombosis (not cerebral)	1									1									1		1					1														1	
V.—Diseases of the Respiratory System.																																								
Group Total	12		2							1		1	2	2	3	1		5	7		11	1			5	5	2			2	2		1			1	1		2	2	1
100A. Broncho-pneumonia	6		1							1					3	1		3	3		5	1			4	1	1				2		1			1		1	1	
101B. Pneumonia not otherwise defined	5		1									1	2	1				1	4		5				1	3	1			2						1		1	1
102. Pleurisy	1													1				1			1					1												1		
VI.—Diseases of the Digestive System.																																								
Group Total	13	3	1				1			1		2	1	1	1	2		8	5		10	2		1	6	5	2				1	2	1	1	1		4	1	1	1
109. Diseases of the pharynx and tonsils (including adenoid vegetation)	1															1			1		1						1					1								
111B. Ulcer of the duodenum	1											1						1			1					1							1							
112. Other diseases of the stomach (cancer excepted)	1											1							1					1		1					1								
113. Diarrhoea and enteritis (under 2 years)	4	3	1															3	1		4				4											3	1			
114. Diarrhoea and enteritis (over 2 years)	1															1			1			1				1										1				
117. Appendicitis and typhlitis	2						1						1					2			2				1	1				1									1
118B. Intestinal obstruction	1														1			1				1			1													1	
119B. Other diseases of the intestine	1													1				1			1				1									1					
123. Biliary calculi	1										1								1		1					1							1						
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																								
Group Total	9										3	1			3	2		6	3		6	3			1	5	3				1				2		2	2		2
129. Chronic nephritis (Bright's disease)	8										3	1			2	2		5	3		5	3			1	5	2				1				2		1	2		2
133. Diseases of the bladder	1														1			1			1						1										1			

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**177**	**29**	**5**	**2**		**1**	**6**	**2**	**2**	**11**	**7**	**14**	**19**	**27**	**31**	**21**		**85**	**92**		**149**	**20**	**6**	**2**	**71**	**67**	**39**			**25**	**17**	**14**	**13**	**21**	**14**	**15**	**14**	**10**	**10**	**9**	**15**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	29	3	4	1	..	..	2	1	..	5	4	3	3	2	1	..	..	16	13	..	26	2	1	..	17	10	2	..	..	3	3	2	4	2	2	3	1	1	3	2	3
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
7. Measles	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
9. Whooping cough	5	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5	..	..	..	5	..	..	..	..	1	2	..	1	..	..	1	..	..	..	..	..
10. Diphtheria	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
11A. Influenza with pneumonic complications specified	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
31. Tuberculosis of the respiratory system	14	..	..	..	..	..	..	1	..	4	4	2	1	2	..	..	..	6	8	..	11	2	1	..	5	7	2	..	..	..	1	2	2	..	2	1	1	..	2	..	3
32. Tuberculosis of the meninges and central nervous system generally	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..
34. Tuberculosis of the vertebral column	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
37B. Disseminated tuberculosis, chronic	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Total deaths from tuberculosis	19	1	1	..	..	..	..	1	..	5	4	2	2	2	1	..	..	10	9	..	16	2	1	..	8	9	2	..	..	1	1	2	3	2	2	1	1	..	3	..	3
II.—General Diseases.																																								
Group Total	27	..	..	..	..	..	1	..	..	..	..	3	6	7	8	2	..	12	15	..	21	3	2	1	4	14	9	..	..	3	4	3	2	2	2	5	1	2	1	..	2
44. Malignant tumors of the stomach and liver	6	..	..	..	..	..	..	..	..	..	..	..	2	1	3	..	..	3	3	..	6	..	..	..	..	2	4	..	..	..	1	..	..	1	1	2	..	1	..	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	3	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	2	..	3	..	..	..	1	2	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..
46. Malignant tumors of the female genital organs	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
47. Malignant tumors of the breast	3	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3	..	2	1	..	..	..	2	1	..	..	..	1	..	..	..	..	..	..	..	1	..	1
49. Malignant tumors of other or unspecified organs	9	..	..	..	..	..	1	..	..	..	..	1	..	2	4	1	..	6	3	..	4	2	2	1	2	3	4	..	..	1	1	2	..	..	..	3	1	1	..	..	..
Total deaths from cancer	23	..	..	..	..	..	1	..	..	..	..	2	4	6	8	2	..	10	13	..	17	3	2	1	4	10	9	..	..	1	3	3	2	2	1	5	1	2	1	..	2

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BROCKVILLE—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	15	15	16	17	18	19	20	21	22	22	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
113. Diarrhoea and enteritis (under 2 years)	2	2																2			2				2									1			1				
114. Diarrhoea and enteritis (over 2 years)	2													1		1			2		2				2									1			1				
117. Appendicitis and typhlitis	4						1		1	2									4		3	1			3	1					1		1	1		1				
122B. Cirrhosis not returned as alcoholic	1															1			1		1					1					1									
124. Other diseases of the liver	1													1					1		1					1										1				
125. Diseases of the pancreas	1						1												1		1				1													1		
126. Peritonitis of unstated origin	1						1											1			1				1					1										
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																								
Group Total	7									1	1			3		2		3	4		7					4	3			1		1		2	1			1		
129. Chronic nephritis (Bright's disease)	4										1			2		1		2	2		4					2	2			1		1			1					1
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1															1			1		1						1							1						
135. Diseases of the prostate	1													1				1			1					1										1				
141. Other diseases of the female genital organs	1									1									1		1					1								1						
XI.—Malformations.																																								
Group Total	3	3																2	1		3				3					1					1	1				
159C. Congenital malformations of the heart	3	3																2	1		3				3					1					1	1				
XII.—Diseases of Early Infancy.																																								
Group Total	12	12																7	5		11			1	12						1		1	3	1		4	1		1	
160B. Congenital debility, icterus and scleroma	7	7																3	4		6			1	7						1			2	1		2	1			
161A. Premature birth	3	3																3			3				3												2			1	
161B. Injury at birth	1	1																1			1				1								1							
162. Other diseases peculiar to early infancy	1	1																	1		1				1									1						
XIII.—Old Age.																																								
164. Senility total	5														1	4		2	3		2	3			1	1	3				2	1	1							1

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CAUSES OF DEATH IN THE TOWN OF COBOURG, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	116	13	4	1			1	1	2	2	9	6	11	19	28	19		60	56		85	23	6	2	55	34	27			9	11	12	9	13	13	9	5	11	8	5	11
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	13		1	1			1	1		1	1	2	2	3				7	6		12	1			7	4	2				4	2	1	1	1	1		1	1		1
10. Diphtheria	2			1			1											1	1		2				2						2										
31. Tuberculosis of the respiratory system	7									1		2	1	3				2	5		6	1			3	2	2					1		1	1	1		1	1		1
32. Tuberculosis of the meninges and central nervous system generally	1										1							1			1					1				1										
33. Tuberculosis of the intestines and peritoneum	2		1					1										2			2				2					1		1								
35. Tuberculosis of the joints	1												1					1			1					1					1									
Total deaths from tuberculosis	11		1					1		1	1	2	2	3				6	5		10	1			5	4	2				2	2	1	1	1	1		1	1		1
II.—General Diseases.																																								
Group Total	13	1									2	1	2	3	4			6	7		9	2	1	1	6	5	2			1	3				1	2	1	1			4
44. Malignant tumors of the stomach and liver	3										1			2				2	1		3				3						1				1		1			
45. Malignant tumors of the peritoneum, intestines and rectum	4												1		3			3	1		3		1		1	3					1				1					2
49. Malignant tumors of other or unspecified organs	2												1		1			1	1		1	1				1	1			1										1
Total deaths from cancer	9										1		2	2	4			6	3		7	1	1		4	4	1			1	2				1	1		1			3
57. Diabetes	1											1						1			1					1										1					
58A. Pernicious anaemia	1										1							1						1	1												1				
58B. Other anaemias and chlorosis	1													1				1			1					1														1
69. Other general diseases	1	1																1			1				1					1										

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COBOURG—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																									
Group Total	4										1			1	1	1		3	1		2	2				3	1							1	1		1	1			
129. Chronic nephritis (Bright's disease)	2										1					1		1	1		2					1	1							1	1						
133. Diseases of the bladder	1														1			1				1				1										1				
135. Diseases of the prostate	1													1					1				1				1										1				
XI.—Malformations.																																								
Group Total	1	1																	1		1				1								1								
159c. Congenital malformations of the heart	1	1																	1		1				1								1								
XII.—Diseases of Early Infancy.																																									
Group Total	6	6																5	1		6				6								2	1		1	1	1		
160b. Congenital debility, icterus and scleroma	5	5																5			5				5								1	1		1	1	1		
161a. Premature birth	1	1																	1		1				1								1								
XIII.—Old Age.																																									
164. Senility total	10													1	1	8		2	8		5	4	1		2	4	4			1	1		1		1	2	1		1	1	1
XIV.—External Causes.																																									
Group Total	6										1				3	2		2	4		1	4		1	2	1	3				1	1	2						1	
179. Burns (conflagration excepted)	1														1				1		1						1					1								
182. Accidental drowning	1										1							1				1			1									1						
185. Accidental injury by fall	1														1				1			1				1							1							
201c. Fracture (cause not specified)	3														1	2		1	2			2		1	1		2				1		1						

CAUSES OF DEATH IN THE TOWN OF COLLINGWOOD, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	92	9	1		1	1	4	2	2	7	3	5	12	16	16	13		42	50		67	18	5	2	31	43	18			13	1	14	10	7	6	8	8	6	8	5	6
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	14				1		1		2	4	1		1	1	3			8	6		11	2	1		10	4				4		1	1	1	2	2	1	1		1	
10. Diphtheria	2				1		1											2			2				2					1				1						
25. Purulent infection, septicaemia	2													1	1			2			1	1			1	1					1				1					
29. Tetanus	1										1								1		1					1														
31. Tuberculosis of the respiratory system	7								1	3			1		2			4	3		6	1			5	2				2			1	1		1	1	1			
36c. Tuberculosis of the lymphatic system (mesenteric and retro-peritoneal glands excepted)	1								1										1				1		1									1						
36d. Tuberculosis of the genito-urinary system	1									1									1		1				1													1		
Total deaths from tuberculosis	9								2	4			1		2			4	5		7	1	1		7	2				2			1	1	1	1	1	1		1	
II.—General Diseases.																																								
Group Total	16						1					4	3	4	2	2		3	13		10	5		1	2	12	2			2	1	4	1	2	1		1		2	2	
44. Malignant tumors of the stomach and liver	2											1	1					1	1		1	1				2					1		1						
45. Malignant tumors of the peritoneum, intestines and rectum	2													2					2		2				1	1					1						1		
47. Malignant tumors of the breast	4											2	1		1				4		3	1				3	1		1	1		1						1	
49. Malignant tumors of other or unspecified organs	1												1						1		1					1					1								
Total deaths from cancer	9									1		3	3	2	1			1	8		7	2			1	7	1			1	1	3	1	1				1	1	
52. Chronic rheumatism, osteo-arthritis, gout	2														1	1			2			2				2					1							1	
57. Diabetes	2													1		1			2		1	1				1	1		1								1		
58A. Pernicious anaemia	2													1		1		1	1		1	1				2								1	1				
58B. Other anaemias and chlorosis	1						1											1			1				1											1			

COLLINGWOOD—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	41
III.—Diseases of the Nervous System.																																									
Group Total	13		1									1	3	4	3	1		6	7		9	2	2		1	7	5			2		2	1			1	2	1	2	1	1
71A. Meningitis	2		1										1					1	1		2				1	1				1		1									
73. Other diseases of the spinal cord	1													1				1			1					1						1									
74A. Cerebral haemorrhage, apoplexy	8											1	2	2	2	1		4	4		4	2	2			4	4			1					1	1	1	2	1	1
75B. Other forms of paralysis	1														1				1		1						1						1								
77. Other forms of mental alienation	1													1					1		1					1										1					
IV.—Diseases of the Circulatory System.																																								
Group Total	7						1						1	2	1	2		3	4		7				2	3	2			2		1				1	1		1	1	
88. Acute endocarditis and myocarditis	1						1												1		1				1					1										
90. Other diseases of the heart	3												1			2		1	2		3				1	2						1				1		1		
91B. Arteriosclerosis	3													2	1			2	1		3					1	2			1						1			1	
V.—Diseases of the Respiratory System.																																								
Group Total	9	3					1						1		2	2		3	6		6	3			4	2	3						2	4		1			1		1
99B. Bronchitis, chronic	1												1						1		1						1								1					
99C. Bronchitis not otherwise defined under 5 years of age	2	2																1	1		2				2								2							
99D. Bronchitis not otherwise defined over 5 years	1															1			1		1						1					1								
100A. Broncho-pneumonia	1														1			1				1			1															1
101A. Pneumonia, lobar	1							1										1			1				1													1		
101B. Pneumonia not otherwise defined	3	1													1	1			3		1	2			1	1	1						1	2						
VI.—Diseases of the Digestive System.																																								
Group Total	9	2						1		1	1		1	1	1	1		5	4		6	2		1	3	6								1	1	2		2	1		2
113. Diarrhoea and enteritis (under 2 years)	2	2																2			1			1	2									1				1		
114. Diarrhoea and enteritis (over 2 years	1													1					1		1					1												1		
117. Appendicitis and typhlitis	3							1			1		1					2	1		3				1	2									1	2				
118B. Intestinal obstruction	1															1		1				1				1											1		
119B. Other diseases of the intestine	1														1				1			1				1													1	
123. Biliary calculi	1									1									1		1					1													1	

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	175	23	4	1		2	9	3	7	8	12	12	20	27	23	23	1	82	93		137	20	13	5	67	60	48			12	9	15	12	23	13	9	14	20	19	13	16
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	19	1	1			1	4	1	1	2	3	2	1		1	1		7	12		14	2	3		12	3	4			1			1	3	1	1	2	2	2	4	2
1A. Typhoid fever	5							1		2	1				1			4	1		3	1	1		3		2							2			1		1	1	
9. Whooping cough	1	1																	1		1				1														1		
10. Diphtheria	5		1			4												2	3		5				5										1		1	1	1	
11A. Influenza, with pneumonic complications specified	1					1													1		1				1								1							
11B. Influenza, without pneumonic complications specified	1					1													1		1				1								1							
31. Tuberculosis of the respiratory system	5								1		2	1	1					1	4		4		1		2	2	1			1						1	2		1	
33. Tuberculosis of the intestines and peritoneum	1											1							1				1			1														1
Total deaths from tuberculosis	6								1		2	2	1					1	5		4		2		2	3	1			1						1	2		1	1
II.—General Diseases.																																								
Group Total	29	1										2	10	8	5	3		13	16		26		1	2	3	15	11			2	2	3	3	4	2	2	2	1	2	4	2
43. Malignant tumors of the buccal cavity	1															1		1			1				1							1								
44. Malignant tumors, stomach and liver	7											1		3	2	1		5	2		6			1	1	3	3			1		2				1		1	2	
45. Malignant tumors, peritoneum, intestines and rectum	6											1	3	1	1			2	4		5			1		4	2						2			1				1
46. Malignant tumors, female genital organs	4												2	1	1				4		4					3	1			1			1					1		1
47. Malignant tumors, breast	1												1						1		1						1						1							
48. Malignant tumors, skin	1															1		1			1						1												1	
49. Malignant tumors of other or unspecified organs	2												1	1				1	1		1		1			2							1						1	
Total deaths from cancer	22											2	7	6	4	3		10	12		19		1	2	2	12	8			1	1	3	2	3		2	1	1	2	4	2
51. Rheumatic fever	1													1					1		1					1				1										

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Number of column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
117. Appendicitis and typhlitis	7					1	1	2	1	1		1						3	4		5	1	1		5	1	1							1	1		2	1		1
118B. Intestinal obstruction	3	1	1									1						1	2		3				2	1											1	1	1		
119B. Other diseases of the intestine	2									1	1							1	1		2					2											1		1	
124. Other diseases of the liver	1												1						1		1					1										1				
126. Peritonitis of unstated origin	1											1							1		1					1											1			
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	9										1		3	3	1	1		4	5		4	4	1		2	3	4				1	1	2			1		1	1	2
128. Acute nephritis	1													1				1				1				1						1							
129. Chronic nephritis (Bright's disease)	7										1		3	2		1		2	5		3	3	1		2	2	3			1	1				1		1	1	2
135. Diseases of the prostate	1														1			1			1						1					1							
VIII.—The Puerperal State.																																								
Group Total	3									1	2								3		3					3					1				1		1			
143B. Ectopic gestation	1									1									1		1					1											1		
143C. Other accidents of pregnancy	1										1								1		1					1									1				
148. Puerperal albuminuria and convulsions	1											1							1		1					1					1								
XI.—Malformations.																																							
Group Total	2	2																2			2				2											1			1	
159C. Congenital malformations of the heart	2	2																	2		2				2											1			1	
XII.—Diseases of Early Infancy.																																							
Group Total	11	11																6	5		11				11					2	1	2	1		1			2	1	1
160B. Congenital debility, icterus and scleroma	3	3																1	2		3				3							1	1					1	
161A. Premature birth	8	8																5	3		8				8					2	1	1		1			2		1
164. XIII.—Old Age.																																							
Group Total	12														3	9		5	7		10	1	1			3	9			2	2		1	3	1		1	1	1	

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CAUSES OF DEATH IN THE TOWN OF EASTVIEW, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	41	27		1	1	1			1		1	1	1	2	3	2		19	22		37	2		2	31	4	6			4	4	3	1	2	2	5	6	4	1	5	4
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	4	1				1					1	1						3	1		4				2	2				1		1							1	1
9. Whooping cough	1	1																1			1				1							1								
10. Diphtheria	1					1												1			1				1													1		
31. Tuberculosis of the respiratory system	2										1	1						1	1		2					2				1									1	
Total deaths from tuberculosis	2										1	1						1	1		2					2				1									1	
II.—General Diseases.																																								
Group Total	1														1			1			1						1				1									
Total deaths from cancer	1														1			1			1						1				1									
66. Alcoholism (acute or chronic)	1														1			1			1						1				1									
III.—Diseases of the Nervous System.																																								
Group Total	2	1		1														1	1		2				2														2	
71a. Meningitis	2	1		1														1	1		2				2														2	
IV.—Diseases of the Circulatory System																																								
Group Total	5				1				1				1		1	1		1	4		3	1		1	2	1	2			1	1					1			1	1
88. Acute endocarditis and myocarditis	1								1										1		1				1															1
89. Angina pectoris	1												1					1			1					1										1				
91b. Arteriosclerosis	2														1	1			2			1		1			2				1							1	
95. Diseases of the lymphatic system (lymphangitis, etc.)	1				1														1		1				1							1							

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CAUSES OF DEATH IN THE TOWN OF FORD CITY, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	56	26	3	1			1	2	2	1	6	1	2	4	4	3		26	30		44	5	7		40	11	5			5	10	3	6	3	4	4	8	4	2	5	2
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	9	1	1	1			1	1		1	3							5	4		6	1	2		6	3					2	1			1		2	2		1	
9. Whooping cough	1	1																1			1				1												1				
10. Diphtheria	1						1												1		1				1						1										
23. Encephalitis lethargica	2							1			1							1	1		1		1		1	1					1			1							
25. Purulent infection, septicaemia	1			1														1					1		1											1				
31. Tuberculosis of the respiratory system	3									1	2							1	2		2	1			1	2											1	1		1	
32. Tuberculosis, meninges and central nervous system generally	1		1															1			1				1					1										
Total deaths from tuberculosis	4		1							1	2							2	2		3	1			2	2				1							1	1		1	
II.—General Diseases.																																								
Group Total	1							1											1			1			1								1							
69. Other general diseases	1							1											1			1			1								1							
III.—Diseases of the Nervous System.																																								
Group Total	3													1	1	1		1	2		3				1	1	1				3										
74A. Cerebral haemorrhage, apoplexy	3													1	1	1		1	2		3				1	1	1				3										
IV.—Diseases of the Circulatory System.																																								
Group Total	6											1	1	1	1	2		3	3		3	1	2		2	2	2			1		1			2					2	
89. Angina pectoris	1													1				1			1				1							1								
90. Other diseases of the heart	3											1			1	1		2	1		1		2		1	1	1						2						1	
91B. Arteriosclerosis	2												1			1			2		1	1				1	1		1										1	

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CAUSES OF DEATH IN THE TOWN OF HAWKESBURY, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1	2	3	4	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	80	31				1		1	1	3	5	6	2	9	6	8		38	42		76	2		2	43	25	11		1	6	8	8	9	7	9	10	6	4	8	4	3
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	9								1	2	3	2		1				2	7		9				2	6	1					3		1	1	3	1				
1A. Typhoid fever	3								1		1			1				2	1		3				1	1	1					1			1	1					
29. Tetanus	1											1							1		1					1								1						
31. Tuberculosis of the respiratory system	4									1	1	2							4		4				1	3						2			1	1					
33. Tuberculosis of the intestines and peritoneum	1									1									1		1					1								1						
Total deaths from tuberculosis	5									2	1	2							5		5				1	4						2		1	1	1					
II.—General Diseases.																																								
Group Total	8											2	2	3		1		6	2		7			1	1	6			1	1					4	1	2				
44. Malignant tumors, stomach and liver	5											1	1	3				3			4			1		4			1	1					2	1	1			
46. Malignant tumors, female genital organs	2											1	1						2		2				1	1									2					
49. Malignant tumors of other or unspecified organs	1															1		1			1					1										1				
Total deaths from cancer	8											2	2	3		1		6	2		7			1	1	6			1	1					4	1	2				
III.—Diseases of the Nervous System.																																								
Group Total	4	1						1				1		1				2	2		4				2	2						1						2		1
71A. Meningitis	1							1										1			1				1												1			
74A. Cerebral haemorrhage, apoplexy	1											1							1		1					1						1								
75B. Other forms of paralysis	1													1					1		1					1											1			
80. Infantile convulsions (under 5 years of age)	1	1																	1		1				1															1

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HAWKESBURY—Concluded.

Number of Column.	1	2	3	4	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII. Diseases of Early Infancy.																																									
Group Total	17	17																12	5		17				17					3	1		3	3		4	1		2		
160B. Congenital debility, icterus and scleroma	10	10																6	4		10				10					2	1		1	2		3	1				
161A. Premature birth	6	6																6			6				6					1			2			1		2			
162. Other diseases peculiar to early infancy	1	1																	1		1				1									1							
XIII.—Old Age.																																									
164. Senility total	1															1			1		1						1												1		
XIV.—External Causes.																																									
Group Total	1										1							1			1					1								1							
201C. Fracture (cause not specified)	1										1							1			1					1								1							

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	89	18					1		3	3	8	6	14	12	14	10		45	44		71	17	1		32	39	18			11	6	10	8	5	9	2	5	7	9	6	11
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	7	1							2		2		2					3	4		7				3	4						1	3						1	2
1A. Typhoid fever	1								1										1		1				1														1	
10. Diphtheria	1								1										1		1				1							1								
21. Erysipelas	1	1																	1		1				1							1								
31. Tuberculosis of the respiratory system	2										2							1	1		2					2						1							1
37A. Disseminated tuberculosis—acute	1												1					1			1					1					1								
Total deaths from tuberculosis	3										2		1					2	1		3					3					1	1							1
38C. Syphilis, tertiary	1												1					1			1					1													1
II.—General Diseases.																																							
Group Total	16									1	1	1	3	5	5			6	10		10	5	1		2	9	5			1	1	1	2	1	2		3	2	2		1
43. Malignant tumors of the buccal cavity	1														1				1		1						1										1			
44. Malignant tumors of the stomach and liver	2												1	1				2			2					2				1					1				
45. Malignant tumor of the peritoneum intestines and rectum	3													2	1			2	1		1	2			1	2									1		1		1
46. Malignant tumors of the female genital organs	1														1				1			1					1						1						
49. Malignant tumors of other or unspecified organs	5											1	1	1	2			1	4		3	2				3	2			1		1	1		2				
Total deaths from cancer	12											1	2	4	5			5	7		7	5			1	7	4			1	1	1	1	1	2		2		2		1
58A. Pernicious anaemia	1										1								1				1			1						1								
65A. Leukaemia	2												1	1				1	1		2					1	1									1	1		
67A. Chronic lead poisoning	1									1									1		1				1												1		

INGERSOLL—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System.																																									
Group Total	12	1							1		1	1	3	2	2	1		5	7		12				3	6	3			1	2	1		2	2			1	1		2
70 Encephalitis	1								1										1		1				1																
74A. Cerebral haemorrhage, apoplexy	6											1	3	1		1		4	2		6					5	1			1	1		2			1			1
75B. Other forms of paralysis	3													1	2				3		3				1		2						1				1		1
79. Convulsions (non-puerperal; 5 years and over)	1										1								1		1					1				1									
80. Infantile convulsions (under 5 years of age)	1	1																1			1				1						1								
IV.—Diseases of the Circulatory System.																																							
Group Total	10												3	2	4	1		4	6		8	2			2	5	3			4	1	1	1	1				1	1	
89. Angina pectoris	1												1					1			1					1				1									
90. Other diseases of the heart	8												2	1	4	1		3	5		6	2			1	4	3			2	1	1	1	1				1	1	
91B. Arteriosclerosis	1													1					1		1				1					1										
V.—Diseases of the Respiratory System.																																							
Group Total	7											2	2	1	2			2	5		3	4			2	3	2			2		1					1	2	1	
100A. Broncho-pneumonia	1											1							1			1				1					1								
101B. Pneumonia not otherwise defined	5											1	1	1	2			3	2		2	3			1	2	2			2							1	1	1	
102. Pleurisy	1												1						1		1				1													1		
VI.—Diseases of the Digestive System.																																							
Group Total	8	5									2			1				7	1		6	2			6	2								1			2	1	1	2	1
111B. Ulcer of the duodenum	1										1							1				1				1													1	
113. Diarrhoea and enteritis (under 2 years)	5	5																4	1		5				5									1			1	1	1	1
114. Diarrhoea and enteritis (over 2 years)	1										1							1			1					1													1	
118B. Intestinal obstruction	1													1				1				1			1											1				
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																							
Group Total	4											1	1	1		1		4			4				1	3					2						1	1		
129. Chronic nephritis (Bright's disease)	3											1	1			1		3			3					3					1						1	1		
135. Diseases of the prostate	1													1				1			1										1									

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CAUSES OF DEATH IN THE TOWN OF KENORA, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	52	9	2	1		2		1		5	7	4	4	3	10	4		27	25		29	12	8	3	23	21	8			11	3	2	5	2	5	5	4	2	4	4	5
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	13	..	1	1	..	2	..	1	..	2	2	2	1	..	1	..	..	5	8	..	11	1	1	..	7	5	1	..	..	2	..	..	2	..	1	2	..	1	..	1	4
1A. Typhoid fever	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
8. Scarlet fever	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
9. Whooping cough	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
10. Diphtheria	2	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
11B. Influenza without pneumonic complications specified	2	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2	..	2	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
31. Tuberculosis of the respiratory system	4	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	2	2	..	4	..	..	..	1	3	..	..	..	..	..	..	1	..	1	2	..	..	..	..	..
36E. Tuberculosis of the organs other than the above	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
II.—General Diseases.																																								
Group Total	4	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	2	2	..	..	3	1	..	..	3	1	..	..	..	..	..	..	..	1	1	..	..	1	..	1
44. Malignant tumors of the stomach and liver	3	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	2	1	..	..	3	..	..	..	2	1	..	..	..	..	..	..	..	..	1	..	..	1	..	1
46. Malignant tumors of the female genital organs	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Total deaths from cancer	4	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	2	2	..	..	3	1	..	..	3	1	..	..	..	..	..	..	1	..	1	..	..	1	..	1
III.—Diseases of the Nervous System.																																								
Group Total	3	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	1	2	..	1	1	1	..	..	3	..	..	..	1	..	1	..	..	..	..	..	1	..	..
71A. Meningitis	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
74A. Cerebral haemorrhage, apoplexy	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
75B. Other forms of paralysis	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..

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KENORA—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
XII.—Diseases of Early Infancy.																																									
Group Total	3	3																3			3				3						1	1		1						
160B. Congenital debility, icterus and scleroma	2	2																2			2				2						1			1						
161A. Premature birth	1	1																1			1				1							1								
XIII.—Old Age.																																								
164. Senility total	2														1	1			2			1	1			1	1			1									1		
XIV.—External Causes.																																								
Group Total	4									1	2	1						4				2	1	1	1	3				2					1		1				
168. Suicide by hanging or strangulation	1										1							1						1		1				1										
182. Accidental drowning	1										1							1				1				1										1				
186A. Accidental injury in mines	1									1								1					1		1									1						
Other forms of crushing (vehicles, railways, landslides, etc.)	1											1						1				1				1				1									
188A. Railroad accidents	1											1						1				1				1				1									
XV.—Ill-Defined Diseases.																																							
Group Total	2										1		1					2						2	1	1				1					1					
205A. Cause of death unstated or ill-defined	2										1		1					2						2	1	1				1					1					

CAUSES OF DEATH IN THE TOWN OF LINDSAY, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	116	14	5	1	1		1	2	6	4	4	6	9	15	28	20		59	57		99	12	3	2	52	46	18			8	12	7	11	8	7	7	14	9	7	11	15
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	11	....	..	1	1	..	1	1	..	3	1	2	1	..	..	..	..	7	4	....	9	..	2	..	8	3	....	..	..	1	2	1	..	1	1	..	3	..	1	1	..
1A. Typhoid fever	3	....	..	..	..	..	..	..	..	1	1	1	....	..	..	..	..	2	1	....	3	..	..	..	2	1	....	..	..	..	..	..	..	..	..	..	1	..	1	1	..
6. Smallpox	1	....	..	..	..	..	..	1	..	..	..	..	....	..	..	..	..	1	..	....	1	..	..	..	1	..	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	1	....	..	..	1	..	..	..	..	....	..	..	....	..	..	..	..	1	..	....	..	..	1	..	1	..	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..
10. Diphtheria	1	....	..	..	..	..	1	..	..	....	..	..	....	..	..	..	..	..	1	....	1	..	..	..	1	..	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..
11B. Influenza without pneumonic complications specified	2	....	..	..	..	..	..	..	..	1	..	1	....	..	..	..	..	1	1	....	1	..	1	..	1	1	....	..	..	1	..	..	..	1	..	..	..	..	..	..	..
21. Erysipelas	1	....	..	..	..	..	..	..	..	....	..	..	1	..	..	..	..	1	..	....	1	..	..	..	1	..	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	2	....	..	1	..	..	..	..	..	1	..	..	....	..	..	..	..	1	1	..	2	..	..	..	1	1	....	..	..	..	..	1	..	..	..	..	1	..	..	..	..
Total deaths from tuberculosis	2	....	..	1	..	..	..	..	..	1	..	..	....	..	..	..	..	1	1	..	2	..	..	..	1	1	....	..	..	..	..	1	..	..	..	..	1	..	..	..	..
II.—General Diseases.																																								
Group Total	21	....	..	..	..	..	..	1	..	....	1	2	4	4	8	1	..	13	8	....	20	1	....	..	6	11	4	....	..	1	2	..	..	..	4	1	4	2	3	2	2
43. Malignant tumors of the buccal cavity	1	....	..	..	..	..	..	..	..	....	..	..	1	..	..	..	..	1	..	....	1	..	..	..	..	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..
44. Malignant tumors of the stomach and liver	3	....	..	..	..	..	..	..	..	....	..	..	1	..	2	..	..	2	1	....	3	..	..	..	..	2	1	....	..	..	..	..	..	..	..	1	..	1	1	..
45. Malignant tumors of the peritoneum, intestines and rectum	1	....	..	..	..	..	..	..	..	....	..	..	....	..	1	..	..	..	1	....	1	..	..	..	..	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..
49. Malignant tumors of other or unspecified organs	9	....	..	..	..	..	..	1	..	....	..	..	2	3	2	1	..	7	2	..	9	..	..	..	5	3	1	..	..	..	1	..	..	..	1	1	2	..	1	1	2
Total deaths from cancer	14	....	..	..	..	..	..	1	..	....	..	1	3	3	5	1	..	10	4	..	14	..	..	..	5	7	2	..	..	..	1	..	..	..	2	1	3	1	2	2	2
52. Chronic rheumatism, osteo-arthritis, gout	1	....	..	..	..	..	..	..	..	....	..	..	....	..	1	..	..	1	..	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
58A. Pernicious anaemia	1	....	..	..	..	..	..	..	..	....	..	..	....	1	..	..	..	1	..	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
58B. Other anaemias and chlorosis	3	....	..	..	..	..	..	..	..	....	..	..	1	..	2	..	..	..	3	....	2	1	..	..	1	1	1	..	..	1	..	..	..	..	1	..	..	..	1	..	..
60A. Exophthalmic goitre	1	....	..	..	..	..	..	..	..	....	..	1	....	..	..	..	..	..	1	....	1	..	..	..	..	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..
66. Alcoholism (acute or chronic)	1	....	..	..	..	..	..	..	..	....	1	..	....	..	..	..	..	1	..	....	1	..	..	..	..	1	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..

LINDSAY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System.																																									
Group Total	14	1	1								1		1	4	4	2		8	6		12	2			6	6	2			2	1			1	1	3		2	1	1	2
71B. Cerebrospinal meningitis	1													1				1				1				1											1			
73. Other diseases of the spinal cord	1		1															1			1				1								1							
74A. Cerebral haemorrhage, apoplexy	8												1	2	3	2		5	3		7	1			2	4	2			2	1			1		1		1	1	1
75B. Other forms of paralysis	1														1			1			1					1										1				
77. Other forms of mental alienation	1													1					1		1				1										1					
79. Convulsions (non-puerperal; 5 years and over)	1											1							1		1				1												1			
80. Infantile convulsions (under 5 years of age)	1	1																	1		1				1														1
IV.—Diseases of the Circulatory System.																																								
Group Total	16								2			1		3	5	5		9	7		12	2	1	1	4	8	4			1	1	1	2	4			1			3	3
88. Acute endocarditis and myocarditis	1											1						1			1					1							1							
90. Other diseases of the heart	5								1					1	1	2		2	3		4	1			2	1	2			1			1	1					1	1
91B. Arteriosclerosis	8													2	4	2		6	2		6		1	1	2	5	1				1	1		1			1		2	2
93. Embolism and thrombosis (not cerebral)	1								1										1		1					1								1						
92. Atheroma and other diseases of the arteries	1															1			1			1					1							1						
V.—Diseases of the Respiratory System.																																								
Group Total	14	2	2						3					4	3			4	10		11	3			8	1	5			5	3	4				1	1			
98. Diseases of the larynx	1	1																1			1				1					1										
100A. Broncho-pneumonia	3	1	1												1			1	2		3				2		1			2	1									
101B. Pneumonia not otherwise defined	9		1						3					2	3			2	7		6	3			4	1	4			1	2	4				1	1			
103. Congestion and haemorrhagic infarct of the lung	1														1				1		1				1					1										
VI.—Diseases of the Digestive System.																																								
Group Total	8	2	1						1	1			1	1		1		3	5		8				5	3				1						3	2			2
113. Diarrhoea and enteritis (under 2 years)	2	1	1															2			2				2												2			
114. Diarrhoea and enteritis (over 2 years)	1															1			1		1					1			1										
117. Appendicitis and typhlitis	2												1	1					2		2				1	1										2			
118B. Intestinal obstruction	1								1												1				1														1
119B. Other diseases of the intestine	1	1																	1		1				1											1			
126. Peritonitis of unstated origin	1									1									1		1					1													1

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CAUSES OF DEATH IN THE TOWN OF MIDLAND, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	93	31	1	2	3		3	2	3	2	3	3	9	11	15	5		47	46		84	9			50	27	16			11	7	9	2	6	6	6	8	7	11	10	10
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	14	6	..	1	..	..	1	1	2	..	1	..	..	2	..	..	..	3	11	..	14	..	..	..	10	3	1	..	..	2	2	1	..	..	1	..	3	1	1	1	2
6. Smallpox	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
9. Whooping cough	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
10. Diphtheria	2	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
15. Cholera nostras	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
16c. Dysentery due to other causes or of unspecified origin	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..
21. Erysipelas	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	3	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	1	2	..	3	..	..	..	2	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1
32. Tuberculosis of the meninges and central nervous system generally	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Total deaths from tuberculosis	4	..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	..	1	3	..	4	..	..	..	2	2	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1
II.—General Diseases.																																								
Group Total	8	..	..	..	1	..	..	1	..	..	..	..	1	2	2	1	..	3	5	..	7	1	..	..	2	4	2	..	..	1	1	1	..	1	..	..	..	2	2	..
44. Malignant tumors of the stomach and liver	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
45. Malignant tumors of the peritoneum, intestines and rectum	2	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	2	..	..	..	1	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..
47. Malignant tumors of the breast	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
49. Malignant tumors of other or unspecified organs	3	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	3	..	2	1	..	..	1	2	..	..	..	..	..	..	..	1	..	..	..	1	1	..
Total deaths from cancer	7	..	..	..	1	..	..	1	..	..	..	..	2	2	1	..	..	2	5	..	6	1	..	..	2	3	2	..	..	..	1	1	..	1	..	..	..	2	2	..
58a. Pernicious anaemia	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..

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MIDLAND—Concluded.

Number of Column.		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1											1							1		1					1			1											
135. Diseases of the prostate	1													1				1			1					1													1	
XI.—Malformations.																																								
Group Total	3	3																2	1		3				3									1	1			1		
159B. Hydrocephalus	1	1																1			1				1										1					
159C. Congenital malformations of the heart	2	2																1	1		2				2									1				1		
XII.—Diseases of Early Infancy.																																								
Group Total	9	9																4	5		9				9					3			1		1		2		2
160B. Congenital debility, icterus and scleroma	2	2																1	1		2				2					1					1				
161A. Premature birth	5	5																3	2		5				5					2						1			2
162. Other diseases peculiar to early infancy	2	2																	2		2				2								1			1			
164. XIII.—Old Age.																																								
Group Total	3													2	1			3			2	1				1	2			1		2							
XIV.—External Causes.																																								
Group Total	8	1				2			1	1			1	2				8			7	1			6	1	1					2		1				2	1	2
175. Poisoning by food	1						1											1			1				1													1	
179. Burns (conflagration excepted)	1						1											1			1				1														1
180. Accidental mechanical suffocation	1	1																1			1				1														1
182. Accidental drowning	2									1	1							2			1	1			2						2								
183. Accidental injury by firearms (war casualties excepted)	1													1				1			1						1										1		
201C. Fracture (cause not specified)	1														1			1			1				1													1		
202. Other external violence	1														1			1			1					1								1						

CAUSES OF DEATH IN THE TOWN OF NORTH BAY, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	130	42	5	2	4		5	4	5	2	10	10	16	5	17	3		70	60		103	23	3	1	76	42	12			13	12	7	14	14	8	13	15	9	7	12	6
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	20	6	..	2	2	..	3	2	1	1	2	..	1	..	..	..	..	7	13	..	19	1	..	..	18	2	..	..	..	2	1	..	3	3	..	3	2	3	2	1	..
1A. Typhoid fever	3	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	1	2	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..
8. Scarlet fever	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
9. Whooping cough	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..
10. Diphtheria	7	1	..	..	2	..	2	1	..	..	1	..	..	..	..	..	..	4	3	..	7	..	..	..	6	1	..	..	..	2	1	..	1	1	..	..	1	1	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
21. Erysipelas	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
32. Tuberculosis, meninges and central nervous system generally	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
33. Tuberculosis of the intestines and peritoneum	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
35. Tuberculosis of the joints	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Total deaths from tuberculosis	3	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	2	..	2	1	..	..	2	1	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..
II.—General Diseases.																																								
Group Total	12	2	..	..	..	..	..	..	1	..	..	1	5	..	3	..	..	7	5	..	6	6	..	..	4	6	2	..	..	..	2	1	1	1	..	2	2	1	..	2	..
44. Malignant tumors, stomach and liver	3	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	2	1	..	..	3	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	..	2	..
45. Malignant tumors, peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	1	1	..	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..
Total deaths from cancer	6	..	..	..	..	..	..	..	..	..	..	1	2	..	3	..	..	4	2	..	2	4	..	..	..	5	1	..	..	..	1	1	1	..	..	..	..	1	..	2	..
51. Rheumatic fever	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
57. Diabetes	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	1	..	..	..	..	1	..	1	..	..	..
58B. Other circulatory and chlorotic	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
69. Other general diseases	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..

NORTH BAY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System.																																									
Group Total	6	1	1	..	..	..	..	..	..	....	1	1	.....	..	2	..	..	3	3	...	4	2	...	...	2	3	1	...	...	...	..	1	..	..	1	..	1	1	1	1	..
73. Other diseases of the spinal cord	1	..	..	..	..	..	..	..	..	....	..	1	.....	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
74A. Cerebral haemorrhage, apoplexy	.. 1	..	..	..	..	..	..	..	..	....	1	..	.....	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
75A. Hemiplegia	1	..	..	..	..	..	..	..	..	....	..	..	.....	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
78. Epilepsy	1	..	..	..	..	..	..	..	..	....	..	..	.....	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
80. Infantile convulsions (under 5 years of age)	2	1	1	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	1	1	...	2	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..
IV.—Diseases of the Circulatory System.																																									
Group Total	19	..	1	..	..	..	..	1	..	....	..	1	4	4	8	..	..	10	9	...	15	3	1	...	3	10	6	..	..	2	3	1	1	4	1	1	3	1	..	1	1
88. Acute endocarditis myocarditis	1	..	1	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
89. Angina pectoris	3	..	..	..	..	..	..	..	..	....	..	..	2	1	..	..	..	2	1	..	3	..	..	..	..	3	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..
90. Other diseases of the heart	10	..	..	..	..	..	..	..	..	....	..	..	1	2	7	..	..	5	5	..	7	3	..	..	..	6	4	..	..	1	1	1	..	2	1	..	2	1	..	..	1
91A. Aneurism	1	..	..	..	..	..	..	1	..	....	..	..	.....	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
91B. Arteriosclerosis	4	..	..	..	..	..	..	..	..	....	..	1	1	1	1	..	..	2	2	..	4	..	..	..	1	1	2	..	..	..	2	..	1	..	..	1	..	..	..	1	..
V.—Diseases of the Respiratory System.																																								
Group Total	18	6	1	..	..	..	1	1	1	....	2	..	2	1	2	1	..	13	5	...	13	5	..	...	10	8	..	..	..	2	4	..	2	1	1	1	..	1	2	2	2
98. Diseases of the larynx	1	1	..	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
99C. Bronchitis, not otherwise defined, under 5 years of age	2	2	..	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	..	2	..	2	..	..	..	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
100A. Broncho-pneumonia	2	2	..	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
101A. Pneumonia, lobar	4	..	..	..	..	..	..	1	1	....	1	..	1	..	..	..	..	1	3	..	4	..	..	..	2	2	..	..	..	..	..	..	..	..	1	..	..	..	2	..	1
101B. Pneumonia, not otherwise defined	8	1	1	..	..	..	1	..	..	....	1	..	1	..	2	1	..	8	..	..	4	4	..	..	3	5	..	..	..	1	3	..	..	1	..	1	..	1	..	1	..
102. Pleurisy	1	..	..	..	..	..	..	..	..	....	..	..	.....	1	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
VI.—Diseases of the Digestive System.																																								
Group Total	17	6	1	..	1	..	..	..	..	....	2	4	1	..	1	1	..	6	11	...	13	2	1	1	9	6	2	..	..	2	..	..	..	1	2	4	3	2	1	2	..
111A. Ulcer of the stomach	1	..	..	..	..	..	..	..	..	....	1	..	.....	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
112. Other diseases of the stomach (cancer excepted)	3	..	..	..	..	..	..	..	..	....	..	1	.....	..	1	1	..	1	2	..	..	1	1	1	1	..	2	..	..	..	..	..	..	1	..	1	..	1	..	..	..
113. Diarrhoea and enteritis (under 2 years)	7	6	1	..	..	..	..	..	..	....	..	..	.....	..	..	..	..	3	4	..	7	..	..	..	7	..	..	..	..	..	..	..	..	..	..	1	3	1	1	1	..
114. Diarrhoea and enteritis (over 2 years)	1	..	..	..	..	..	..	..	..	....	1	..	.....	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
117. Appendicitis and typhlitis	2	..	..	..	1	..	..	..	..	....	..	1	.....	..	..	..	..	..	2	..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..
118B. Intestinal obstruction	1	..	..	..	..	..	..	..	..	....	..	1	.....	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
124. Other diseases of the liver	2	..	..	..	..	..	..	..	..	....	..	1	1	..	..	..	..	1	1	..	2	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	127	20	2			1	3		4	4	4	8	17	26	25	13		66	61		103	17	3	4	44	55	28			11	13	12	13	11	6	6	12	12	11	11	9
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	10	1				1				1	1	1	2	2	1			5	5		9	1			5	4	1				1	2	2	1	2		1		1		
11A. Influenza, with pneumonic complications specified	1	1																	1		1				1							1								
11B. Influenza, without pneumonic complications specified	2												2						2		2				1	1						1	1							
16C. Dysentery, due to other causes or of unspecified origin	1														1				1		1						1											1		
31. Tuberculosis of the respiratory system	6					1				1	1	1		2				5	1		5	1			3	3					1		1	1	2		1			
Total deaths from tuberculosis	6					1				1	1	1		2				5	1		5	1			3	3					1		1	1	2		1			
II.—General Diseases.																																								
Group Total	23	3									1	2	2	8	4	3		12	11		20	3			6	11	6			2	1	3	3	3	1			3	4	3	
43. Malignant tumors of the buccal cavity	1													1				1			1					1				1										
44. Malignant tumors, stomach and liver	5											1		1	3			3	2		4	1			1	3	1			1		1						2	1	
45. Malignant tumors, peritoneum, intestines and rectum	2													2				2			2					1	1							1	1					
46. Malignant tumors, female genital organs	2											1		1					2		2				1	1												2		
47. Malignant tumors, breast	1														1			1			1					1					1									
48. Malignant tumors, skin	1														1			1			1					1				1										
49. Malignant tumors of other or unspecified organs	1														1				1							1						1								
Total deaths from cancer	13											2		5	4	2		7	6		11	2			2	7	4			2	1	2	1	1	1			2	3		
57. Diabetes	2													1		1			2		1	1				1	1						1							1	
58A. Pernicious anaemia	2										1			1				1	1		2				1	1						1	1							
60B. Other diseases of the thyroid gland	1													1					1		1					1												1		
63. Diseases of the adrenals	1												1					1			1					1					1									

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ORILLIA—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																									
Group Total	8												2	2	3	1		3	5		5	2		1		4	4			2			1		1	1			1	2	
128. Acute nephritis	3												1		2				3		2			1		1	2						1							1
129. Chronic nephritis (Bright's disease)	2												1		1				2			2				1	1								1					1
133. Diseases of the bladder	1															1		1			1						1			1									
135. Diseases of the prostate	1													1				1			1					1				1									
136. Non-venereal diseases of the male genital organs	1													1				1			1					1													1	
VIII.—The Puerperal State.																																								
Group Total	2								1			1							2		2					2							1						1	
143a. Abortion	1											1							1		1					1													1	
146 Puerperal sepsis	1								1										1		1					1							1							
XI.—Malformations.																																								
Group Total	2	2																1	1		2				2														1	
159a. Congenital malformations not otherwise specified (still-births excepted)	1	1																	1		1				1													1	
159c. Congenital malformations of the heart	1	1																1			1				1														1	
XII.—Diseases of Early Infancy.																																								
Group Total	7	7																5	2		7				7						1	1		1			2		1		1
160b. Congenital debility, icterus and scleroma	2	2																1	1		2				2												1			1
161a. Premature birth	3	3																3			3				3								1			1		1		
161b. Injury at birth	1	1																1			1				1						1									
162. Other diseases peculiar to early infancy	1	1																	1		1				1							1								
164. XIII.—Old Age.																																								
Group Total	5														1	4		1	4		3	2					5			1	1			1	1			1		

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CAUSES OF DEATH IN THE TOWN OF OSHAWA, 1921

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	154	46	3			3	2	1	3	14	8	12	13	20	16	13		88	66		114	25	3	12	85	57	10		2	8	11	11	13	8	12	9	10	30	10	18	14
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	27	2	..	..	..	1	2	1	2	8	2	2	4	..	2	1	..	11	16	..	19	5	..	3	14	13	..	..	..	3	2	3	4	..	..	..	1	8	3	1	2
1a. Typhoid fever	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
8. Scarlet fever	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
9. Whooping cough	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
10. Diphtheria	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
11a. Influenza, with pneumonic complications specified	3	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	2	..	2	..	..	1	1	2	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..
11b. Influenza, without pneumonic complications specified	5	..	..	..	..	..	1	..	..	..	1	1	1	..	1	..	..	3	2	..	3	1	..	1	2	3	..	..	..	1	1	..	..	..	..	..	..	1	..	..	2
21. Erysipelas	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
23. Encephalitis lethargica	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	..	1	4	1	1	..	..	1	..	..	..	8	..	6	1	..	1	4	4	..	..	..	1	..	..	3	..	..	..	1	2	1	..	..
Total deaths from tuberculosis	8	..	..	..	..	..	..	..	1	4	1	1	..	..	1	..	..	..	8	..	6	1	..	1	4	4	..	..	..	1	..	..	3	..	..	..	1	2	1	..	..
42. Other endemic, epidemic or infectious diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
II.—General Diseases.																																								
Group Total	14	1	..	..	..	..	..	..	..	..	1	3	1	5	2	1	..	6	8	..	12	1	..	1	4	8	1	..	1	..	1	..	..	2	2	2	1	1	..	2	3
43. Malignant tumors of the buccal cavity	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..
44. Malignant tumors, stomach and liver	3	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	3	..	3	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1
45. Malignant tumors, peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	1	1	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..
46. Malignant tumors, female genital organs	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Total deaths from cancer	8	..	..	..	..	..	..	..	..	..	1	2	1	2	1	1	..	4	4	..	7	1	..	..	2	5	1	..	..	..	1	..	..	1	..	..	1	1	..	2	2

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OSHAWA—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																									
Group Total	6									1	1	1		1	1	1		4	2		5	1			1	4	1					1		1				2	1	1	
129. Chronic nephritis (Bright's disease)	6									1	1	1		1	1	1		4	2		5	1			1	4	1					1		1				2	1	1	
VIII.—The Puerperal State.																																									
Group Total	3									1	2								3		1	1		1		3				1	1			1						
144. Puerperal haemorrhage	1											1							1					1		1								1						
145c. Other accidents of labor	1										1								1		1					1				1										
146. Puerperal sepsis	1									1									1			1				1					1									
XI.—Malformations.																																									
Group Total	5	5																5			5				5					1					1			1		2
159a. Congenital malformations not otherwise specified (still-births excepted)	3	3																3			3				3					1								1		1
159b. Hydrocephalus	1	1																1			1				1										1					
159c. Congenital malformations of the heart	1	1																1			1				1															1
XII.—Diseases of Early Infancy.																																									
Group Total	24	24																16	8		23		1		24					1	2	3	4		2	3	4	1	1	2	1
160b. Congenital debility, icterus and sclereoma	6	6																4	2		5		1		6							1	2				1	1	1	
161a. Premature birth	15	15																9	6		15				15						2	2	2		1	2	3			2	1
161b. Injury at birth	2	2																2			2				2					1						1				
162. Other diseases peculiar to early infancy	1	1																1			1				1									1		1				
XIII.—Old Age.																																									
164. **Group Total**	4														2	2		3	1		1	2		1		2	2				1			1		1		1			

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CAUSES OF DEATH IN THE TOWN OF PEMBROKE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	**119**	**32**	**1**	**4**			**7**	**1**	**5**	**13**	**9**	**4**	**7**	**13**	**15**	**8**		**68**	**51**		**99**	**4**	**11**	**5**	**64**	**36**	**19**			**12**	**7**	**9**	**7**	**14**	**11**	**12**	**12**	**12**	**9**	**8**	**6**
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	11						1		2	4	1	2	1					4	7		10		1		6	5					1	1	1	2	1	4		1			
1A. Typhoid fever	1										1							1			1					1						1								
10. Diphtheria	2						1			1								1	1		2				1	1				1										
11B. Influenza, without pneumonic complications specified	1									1								1			1				1									1						
31. Tuberculosis of the respiratory system	6								2	2		2						1	5		6				4	2					1		2		2		1			
33. Tuberculosis of the intestines and peritoneum	1												1						1				1			1									1					
Total deaths from tuberculosis	7								2	2		2	1					1	6		6		1		4	3					1		2		3		1			
II.—General Diseases.																																								
Group Total	12			1					1	1	2			2	5			6	6		11	1			4	4	4			2				1	3			3		1	2
44. Malignant tumors, stomach and liver	1													1				1			1					1			1											
45. Malignant tumors, peritoneum, intestines and rectum	1														1				1		1					1											1			
47. Malignant tumors, breast	1														1				1		1					1								1						
49. Malignant tumors of other or unspecified organs	2														2			2			2					1	1							2						
Total deaths from cancer	5													1	4			3	2		5					2	3			1				3			1			
51. Rheumatic fever	1										1							1			1				1								1							
52. Chronic rheumatism, osteo-arthritis, gout	1									1									1		1				1														1	
57. Diabetes	1														1			1			1		1			1				1										
58A. Pernicious anaemia	1													1				1			1					1											1			
58B. Other anaemias and chlorosis	1			1														1			1				1											1			
60A. Exophthalmic goitre	1								1										1		1				1														1	
69. Other general diseases	1										1								1		1					1														1	

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PEMBROKE—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VIII.—The Puerperal State.																																									
Group Total	1									1									1		1					1										1						
143c. Other accidents of pregnancy	1									1									1		1					1										1						
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	1															1		1					1			1									1						
151. Gangrene	1															1		1					1			1									1						
XII.—Diseases of Early Infancy.																																									
Group Total	14	14																9	5		14				14					3	2	2	2	1		1	2		1	
160b. Congenital debility, icterus and scleroma	3	3																2	1		3				3					1		1		1						
161a. Premature birth	7	7																3	4		7				7					2			2			1	1		1	
161b. Injury at birth	3	3																3			3				3						2	1								
163. Lack of care	1	1																1			1				1												1				
XIII.—Old Age.																																									
164. Senility total	7														1	6		1	6		5		2			1	6			1				1				2	1	2
XIV.—External Causes.																																									
Group Total	6						1		1	1	1	1	1					5	1		4	1		1	4	2					1				1	3			1		
182. Accidental drowning	1								1									1			1				1										1						
185. Accidental injury by fall	1									1								1						1	1										1						
Other forms of crushing (vehicles, railways, landslides, etc.)	2										1	1						2			1	1				2									1			1			
188a. Railroad accidents	1											1						1				1				1												1			
188c. Automobile accidents	1										1							1			1					1									1						
193. Excessive cold	1												1						1		1				1					1										
201c. Fracture (cause not specified)	1						1											1			1				1															
XV.—Ill-Defined Diseases.																																									
Group Total	5	4												1				2	3		5				4		1			1				1			2	1			
205a. Cause of death unstated or ill-defined	5	4												1				2	3		5				4		1			1				1			2	1			

CAUSES OF DEATH IN THE TOWN OF PRESTON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	43	12	1				2	1	1	3	3	1	3	6	3	7		24	19		30	4	8	1	22	13	8			7	6	2	4	5	2	2	4	2	2	4	3
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	11	2	1				2				1			1	2	2		5	6		8	2	1		5	2	4			2		1	1	2		1		2		2	
8. Scarlet fever	1						1											1			1				1															1	
9. Whooping cough	2	1	1															1	1		2				2					1								1			
10. Diphtheria	2	1					1											2			2				2								1				1			
11b. Influenza without pneumonic complications specified	3														1	2		1	2		1	1	1				3			1			1		1					
21. Erysipelas	1														1				1			1					1													1	
31. Tuberculosis of the respiratory system	2										1			1					2		2					2				1	1									
Total deaths from tuberculosis	2										1			1					2		2					2				1	1									
II.—General Diseases.																																								
Group Total	3											1		1		1		1	2		1		2		1	1	1			1		1		1							
44. Malignant tumors of the stomach and liver	1															1			1				1			1				1										
Total deaths from cancer	1															1			1				1			1				1										
57. Diabetes	1											1							1				1		1							1								
58a. Pernicious anaemia	1													1				1			1						1													
III.—Diseases of the Nervous System.																																								
Group Total	6											1		1	2	1	1	5	1		3		3		1	5				1	1				1	1		1	1	1
73. Other diseases of the spinal cord	1													1				1			1					1									1					
74a. Cerebral haemorrhage, apoplexy	5											1		1	1	1	1	4	1		2		3		1	4				1						1		1	1	1

PRESTON—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	7	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
IV.—Diseases of the Circulatory System.																																										
Group Total	5										1		2		1		1		2	3		3		2			3	2				2		2						1		
88. Acute endocarditis and myocarditis	1												1							1		1					1														
90. Other diseases of the heart	3										1		1		1				2	1		2		1			2	1				1		1					1		
91B. Arteriosclerosis	1																1			1				1			1				1										
V.—Diseases of the Respiratory System.																																									
Group Total	1	1																	1			1				1															1
101B. Pneumonia not otherwise defined	1	1																	1			1				1															1
VI.—Diseases of the Digestive System.																																									
Group Total	3	1													1		1		1	2		2			1	2		1			1	1					1				
112. Other diseases of the stomach (cancer excepted)	1														1				1						1	1					1										
113. Diarrhoea and enteritis (under 2 years)	1	1																		1		1				1						1									
114. Diarrhoea and enteritis (over 2 years)	1																1			1		1					1										1				
VII.—Non-Venereal Diseases of the Genito-Urinary System and Its Annexa.																																									
Group Total	2								1								1		1	1		1	1			1	1					1		1							
135. Diseases of the prostate	1																1		1				1				1					1									
138. Salpingitis and pelvic abscess	1								1											1		1				1								1							
VIII.—The Puerperal State.																																									
Group Total	2									2										2		1	1			1	1										1			1	
145A. Caesarean section	1									1										1		1				1											1				
148. Puerperal albuminuria and convulsions	1										1									1			1				1												1		

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	130	22	5	4	2		6	2	4	5	8	11	14	19	19	9		77	53		120	8	1	1	59	45	26			11	9	6	19	11	11	16	5	10	14	14	4
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	25		2	2			4		1	3	4	4	2		2	1		15	10		25				12	9	4			2	2	3	6	1	1	1	1	1	4	2
1A. Typhoid fever	2											1		1				2			2					1	1						1		1					
9. Whooping cough	1						1											1			1				1					1										
10. Diphtheria	5		1	2			2											4	1		5				5								1				1		2	1
11A. Influenza with pneumonic complications specified	6		1				1						1			2	1	5	1		6				2	2	2						4						2	
11B. Influenza without pneumonic complications specified	1										1								1		1					1							1							
31. Tuberculosis of the respiratory system	8								1	3	3		1					1	7		8				2	5	1			1	2	2		1		1	1				
33. Tuberculosis of the intestines and peritoneum	1											1						1			1				1															1
Total deaths from tuberculosis	9								1	3	3	1	1					2	7		9				3	5	1			1	2	2		1		1	1				1
38E. Syphilis, stage not indicated	1											1						1			1				1												1			
II.—General Diseases.																																								
Group Total	11								1	1		2	3	2	2			5	6		11				4	5	2			1	1	1			2			4	2		
44. Malignant tumors of the stomach and liver	4												1	1	2			3	1		4					3	1			1	1							2			
49. Malignant tumors of other or unspecified organs	3											2	1					1	2		3				1	1	1					1			1			1			
Total deaths from cancer	7											2	2	1	2			4	3		7				1	4	2			1	1	1			1			3			
52. Chronic rheumatism, osteo-arthritis, gout	1									1									1		1					1													1		
58A. Pernicious anaemia	2													1	1				2		2				2													1	1		
66. Alcoholism (acute or chronic)	1								1									1			1				1									1							

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SMITH'S FALLS—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1														1				1		1						1				1										
135. Diseases of the prostate	2													1	1			2			1	1				2													1		
VIII.—The Puerperal State.																																									
Group Total	2									1	1							2			2				2							1				1					
143c. Other accidents of pregnancy	1									1								1			1				1											1				
149. Childbirth without other explanation)	1										1							1			1				1							1								
IX.—Diseases of the Skin and Cellular Tissue.																																									
Group Total	1	1																1			1				1														1		
153. Phlegmon, acute abscess	1	1																1			1				1														1		
X.—Diseases of the Bones and Organs of Locomotion.																																									
Group Total	3				1			1					1					3			3				2		1							1				1	1	
156. Diseases of the bones (tuberculosis and rickets excepted)	2				1								1					2			2				1		1							1				1		
158. Other diseases of the organs of locomotion	1							1										1			1				1													1		
XI.—Malformations.																																									
Group Total	3	3																3			3				3					1								1	1	
159c. Congenital malformations of the heart	3	3																3			3				3					1								1	1	
XII.—Diseases of Early Infancy.																																									
Group Total	10	10																8	2		10				10					2	1		3			2		1		1	
160b. Congenital debility, icterus and scleroma	3	3																3			3				3						1				1				1	
161a. Premature birth	5	5																3	2		5				5					2			1		1		1			
161b. Injury at birth	1	1																1			1				1								1							
162. Other diseases peculiar to early infancy	1	1																1			1				1								1							

| XIV.—External Causes. | | |

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	165	36	9	2	4	2	9	6	6	15	23	14	5	23	5	7		108	58		136	10	16	4	103	48	15			16	15	15	18	9	10	18	11	8	21	14	11
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	36	1	1	..	2	2	5	2	2	10	6	4	1	..	..	..	..	26	10	..	27	..	8	1	29	6	1	..	..	4	2	1	3	..	1	4	3	4	8	5	1
1A. Typhoid fever	9	..	..	..	..	..	1	1	..	..	6	2	1	..	..	..	..	9	..	..	6	..	3	..	5	4	..	..	..	..	..	..	..	..	..	1	2	2	3	1	..
8. Scarlet fever	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
10. Diphtheria	11	1	1	..	2	1	4	1	1	..	..	..	..	..	..	..	..	3	8	..	11	..	..	..	11	..	..	..	..	2	1	1	1	..	1	..	..	..	4	1	..
11A. Influenza, with pneumonic complications specified	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
11B. Influenza, without pneumonic complications specified	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
16C. Dysentery, due to other causes or of unspecified origin	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	8	..	..	..	..	..	..	1	..	3	2	2	..	..	..	..	..	6	2	..	6	..	2	..	6	1	1	..	..	1	1	..	1	..	..	3	..	..	..	1	1
33. Tuberculosis of the intestines and peritoneum	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
Total deaths from tuberculosis	10	..	..	..	..	..	..	1	..	3	3	2	1	..	..	..	..	8	2	..	6	..	4	..	8	1	1	..	..	1	1	..	1	..	..	3	1	1	..	1	1
38E. Syphilis, stage not indicated	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
II.—General Diseases.																																								
Group Total	10	1	..	..	..	..	1	..	1	..	..	2	1	4	..	..	..	5	5	..	8	1	1	..	3	6	1	..	..	..	..	..	2	2	1	..	..	1	2	..	2
44. Malignant tumors, stomach and liver	3	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	1	2	..	2	..	1	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
45. Malignant tumors, peritoneum, intestines and rectum	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Total deaths from cancer	4	..	..	..	..	..	..	..	..	..	..	1	..	3	..	..	..	2	2	..	3	..	1	..	..	4	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
51. Rheumatic fever	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
56. Rickets	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
57. Diabetes	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..
58A. Pernicious anaemia	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
60B. Other diseases of the thyroid gland	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
66. Alcoholism (acute or chronic)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..

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SUDBURY—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																									
Group Total	10	1							1	1	1	2	2	2				9	1		4	2	3	1	3	5	2			3			1	1	3	1			1		
128. Acute nephritis	3	1										1		1				3			2		1		1	1	1			3											
129. Chronic nephritis (Bright's disease)	5								1	1		1	2					5			2		2	1	2	3							1	1	2				1		
135. Diseases of the prostate	1													1				1				1					1								1						
138. Salpingitis and pelvic abscess	1										1								1		1					1									1						
VIII.—The Puerperal State.																																								
Group Total	4									1	3								4		3		1			4				1			1					1	1	
144. Puerperal haemorrhage	3									1	2								3		2		1			3				1			1						1	
148. Puerperal albuminuria and convulsions	1										1								1		1					1												1		
X.—Diseases of the Bones and Organs of Locomotion.																																								
Group Total	1							1										1			1				1							1								
156. Diseases of the bones (tuberculosis and rickets excepted)	1							1										1			1				1							1								
XII.—Diseases of Early Infancy.																																								
Group Total	20	20																10	10		20				20					3	2	3	1	2	1	1		4	2	1
160B. Congenital debility, icterus and scleroma	9	9																5	4		9				9						1	2		1	1	1		1	2	
161A. Premature birth	9	9																5	4		9				9					3	1	1	1					3		
161B. Injury at birth	1	1																	1		1				1									1						
162. Other diseases peculiar to early infancy	1	1																	1		1				1														1	
164. XIII.—Old Age.																																								
Group Total	3																3	3			1	1	1		1		2				1					1	1				

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CAUSES OF DEATH IN THE TOWN OF TRENTON, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	68	17	2		1	1	1	1		3	1	1	1	11	20	8		33	35		63	4	1		26	22	20			5	5	2	5	9	7	1	8	8	7	10	1
I.—Endemic, Epidemic and Infectious Diseases.																								1																	
Group Total	11	1	1	..	1	..	1	..	..	2	1	1	..	2	1	..	..	6	5	..	11	..	..	..	5	4	2	..	..	1	2	..	..	1	1	..	3	..	1	2	..
1a. Typhoid fever	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
8. Scarlet fever	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
9. Whooping cough	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
11a. Influenza, with pneumonic complications specified	2	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	2	..	..	..	1	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..
25. Purulent infection, septicaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
29. Tetanus	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
31. Tuberculosis of the respiratory system	4	..	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..	2	2	..	4	..	..	..	1	2	1	..	..	..	..	..	..	1	..	..	1	..	..	2	..
Total deaths from tuberculosis	4	..	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..	2	2	..	4	..	..	..	1	2	1	..	..	..	..	..	..	1	..	..	1	..	..	2	..
II.—General Diseases.																																								
Group Total	7	1	..	..	..	..	..	..	..	..	..	..	..	3	3	..	..	2	5	..	6	1	..	..	1	3	3	..	..	..	..	..	..	1	1	1	1	1	1	1	..
45. Malignant tumors, peritoneum, intestines and rectum	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	1	1	..	..	..	1	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..
48. Malignant tumors, skin	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
49. Malignant tumors of other or unspecified organs	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	2	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Total deaths from cancer	5	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	1	4	..	4	1	..	..	..	3	2	..	..	..	..	..	1	1	..	..	1	1	1	..	..
58a. Pernicious anaemia	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..
69. Other general diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
III.—Diseases of the Nervous System.																																								
Group Total	8	1	..	..	..	1	..	..	..	..	..	..	..	1	2	3	..	2	6	..	8	..	..	..	2	3	3	..	..	1	..	..	..	2	..	..	1	1	..	3	..
71a. Meningitis	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..

| | | |

TRENTON—Concluded.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
164. XIII.—Old Age.																																									
Group Total	4														2	2		2	2		4					2	2						1	1			1			1	
XIV.—External Causes.																																									
Group Total	5	1						1						1	1	1		5			5				2	1	2					1				1	1	1	1		
170. Suicide by firearms	1													1				1			1						1												1		
175. Poisoning by food	1	1																1			1				1												1				
182. Accidental drowning	1							1										1			1				1												1				
185. Accidental injury by fall	1															1		1			1						1											1			
Other forms of crushing (vehicles, railways, landslides, etc.)	1														1			1			1					1						1								
188A. Railroad accidents	1														1			1			1					1						1								
XV.—Ill-Defined Diseases.																																								
Group Total	1														1			1			1					1							1								
205A. Cause of death unstated or ill-defined	1														1			1			1					1							1								

CAUSES OF DEATH IN THE TOWN OF WALKERVILLE, 1921.

OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages															Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	54	11	1		2	1		1	1	4	2	8	4	10	4	5		23	31		40	9	5		22	22	10			4	5	5	3	7	7	2	2	6	3	4
I.—Endemic, Epidemic and Infectious Diseases																																								
Group Total	7	2	1							1		3						3	4		6		1		5	2				1			1	2	1			2		
9. Whooping cough	2	2																1	1		2				2										1			1		
10. Diphtheria	1		1															1			1				1								1							
31. Tuberculosis of the respiratory system	4									1		3						1	3		3		1		2	2				1				2				1		
Total deaths from tuberculosis	4									1		3						1	3		3		1		2	2				1				2				1		
II.—General Diseases.																																								
Group Total	10									1	1	1		5	2			3	7		8	2			1	7	2					1	2	2	1		2	1		1
43. Malignant tumors of the buccal cavity	1													1				1			1					1													
44. Malignant tumors, stomach and liver	1													1					1			1				1						1							
45. Malignant tumors, peritoneum, intestines and rectum	1													1					1		1					1									1				
49. Malignant tumors of other or unspecified organs	2													1	1			1	1		2					2										1			1
Total deaths from cancer	5													4	1			2	3		4	1				4	1						1	1		1	1		1
51. Rheumatic fever	1														1				1		1						1				1								
57. Chronic rheumatism, osteoarthritis, gout	1										1								1		1					1							1						
58A. Pyelitis or pyonephrosis	1									1									1		1					1							1						
60B. Other diseases of the thyroid gland	1													1					1		1					1									1				
66. Alcoholism (acute or chronic)	1											1						1			1				1														

WALKERVILLE—Continued.

Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
III.—Diseases of the Nervous System																																									
Group Total	6	1	..	..	1	..	..	..	..	..	1	..	..	2	..	1	..	2	4	..	3	2	1	..	2	2	2	..	..	1	..	1	..	1	2	..	..	1	..	..	..
71A. Meningitis	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
74A. Cerebral haemorrhage, apoplexy	3	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1	3	..	2	1	..	..	..	1	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..
74B. Cerebral thrombosis and embolism	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..
75B. Other forms of paralysis	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
IV.—Diseases of the Circulatory System.																																								
Group Total	6	..	..	..	..	..	..	1	..	..	..	..	3	..	..	2	..	5	1	..	3	2	1	..	1	2	3	..	..	..	..	..	1	..	1	..	..	..	1	2	1
88. Acute endocarditis and myocarditis	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
90. Other diseases of the heart	4	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	3	1	..	2	1	1	..	..	1	3	..	..	..	..	..	..	..	1	..	..	..	1	2	..
91B. Arteriosclerosis	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
V.—Diseases of the Respiratory System.																																								
Group Total	7	..	..	..	1	..	..	..	..	1	..	2	..	2	..	1	..	3	4	..	6	1	..	..	1	5	1	..	..	2	1	1	..	..	..	..	..	2	..	..	1
100A. Broncho-pneumonia	4	..	..	..	1	..	..	..	..	1	..	..	..	1	..	1	..	1	3	..	3	1	..	..	1	3	..	..	..	..	1	1	..	..	..	..	..	1	..	..	1
101A. Pneumonia, lobar	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	..	2	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..
101B. Pneumonia, not otherwise defined	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
VI.—Diseases of the Digestive System																																								
Group Total	5	4	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3	2	..	4	1	..	..	5	..	..	..	..	..	2	..	..	..	..	..	2	..	..	1
113. Diarrhoea and enteritis (under 2 years)	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	2	1	..	..	3	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..
114. Diarrhoea and enteritis (over 2 years)	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
118B. Intestinal obstruction	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
VII.—Non-Venereal Diseases of the Genito-Urinary System and its Annexa.																																								
Group Total	1	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	1	3	..	2	..	2	..	1	3	..	..	..	1	..	..	..	1	..	..	..	1	1	..	..
129. Chronic nephritis (Bright's disease)	3	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	2	..	1	..	2	..	1	2	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..
131. Other diseases of the kidneys and their annexa (diseases of the kidneys in pregnancy excluded)	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..

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OFFICIAL ENGLISH TRANSLATION. Diseases and Causes of Death.	Total.	Ages.																Sex.			Nativity.				Social Condition					Months.											
		Under 1.	1.	2.	3.	4.	5-9.	10-14.	15-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Not stated.	Male.	Female.	Not stated.	Canada.	British.	Foreign.	Not stated.	Single.	Married.	Widower.	Divorced.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Number of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Grand Total	76	10	4	1	1		2	1		3	2	7	10	7	17	11		41	35		59	6	11		27	28	20		1	12	5	1	7	9	7	2	6	6	5	8	8
I.—Endemic, Epidemic and Infectious Diseases.																																								
Group Total	9		1		1		1	1		2	1	1	1					5	4		9				5	2	2			2			1		1	1	1		1		2
6. Smallpox	1							1										1			1				1										1						
8. Scarlet fever	1				1													1			1				1															1
10. Diphtheria	3		1				1			1								2	1		3				2	1				2			1							
25. Purulent infection, septicaemia	2									1			1					1	1		2				1		1									1				1
31. Tuberculosis of the respiratory system	2										1	1							2		2					1	1							1				1		
Total deaths from tuberculosis	2										1	1							2		2					1	1							1				1		
II.—General Diseases.																																								
Group Total	8	1											3	1	3			6	2		7		1		1	4	3			1			1	2		1		1		1	1
44. Malignant tumors, stomach and liver	3												2		1			2	1		2		1			2	1						1	1						1
45. Malignant tumors, peritoneum, intestines and rectum	2														2			2			2					1	1								1				1	
49. Malignant tumors of other or unspecified organs	2												1	1				1	1		2					1	1							1			1			
Total deaths from cancer	7												3	1	3			5	2		6		1			4	3						1	2		1		1		1	1
65A. Leukaemia	1	1																1			1				1					1										
III.—Diseases of the Nervous System.																																								
Group Total	10	1	1							1			3	1	1	2		7	3		5	2	3		4	5	1			2				2	1		2			3	
73. Other diseases of the spinal cord	2	1													1			2			1		1		1	1								1	1						
74A. Cerebral haemorrhage, apoplexy	6									1			2		1	2		3	3		2	2	2		2	3	1			1				1			1			3	
75B. Other forms of paralysis	1												1					1			1					1											1				
80. Infantile convulsions (under 5 years of age)	1		1															1			1				1					1										

| | | |

WATERLOO—Concluded.

Number of Column.	1	2	3	4	5	6	7	7	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
164. XIII.—Old Age.																																									
Group Total	9														5	4		4	5		5	1	3		2	2	5			1	2	1					2		1		2
XIV.—External Causes.																																									
Group Total	1										1							1			1					1							1									
185. Accidental injury by fall	1										1							1			1					1							1									
XV.—Ill-Defined Diseases.																																									
Group Total	2											1	1						2		2				1		1							1				1				
204. Sudden death	1											1							1		1				1													1				
205A. Cause of death unstated or ill-defined	1												1						1		1						1							1							

Fortieth Annual Report

OF THE

Provincial Board of Health

OF

Ontario, Canada

FOR THE YEAR

1921

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:

Printed by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty

1922

Printed by
THE RYERSON PRESS
TORONTO

To His Honour HENRY COCKSHUTT, ESQ.,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I herewith beg to submit for your consideration the Fortieth Annual Report of the Provincial Board of Health for the year 1921.

Respectfully yours.

W. R. ROLLO.

Minister of Labour.

Toronto, April 20th, 1922.

To the Honorable WALTER R. ROLLO,

Minister of Labour.

SIR,—I have the honour to submit for your approval the Fortieth Annual Report of the Provincial Board of Health, made in conformity with and under the provisions of the Public Health Act, for the year 1921.

I have the honour to be, Sir,

Your obedient servant,

JOHN W. S. MCCULLOUGH,

Chief Officer of Health.

Toronto, April 20th, 1922.

ORGANIZATION

MINISTER OF LABOUR AND HEALTH, THE HONORABLE WALTER R. ROLLO

The Provincial Board of Health

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John W. S. McCullough, M.D., C.M., D.P.H. ..... Toronto

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Robert W. Bell, M.D., C.M. ..... Provincial Inspector of Health

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District:	No. 1. Thos J. McNally, M.D., C.M., D.P.H.	London
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	No. 7. G. L. Sparks, M.D.	Fort William
	No. 8. Hugh W. Johnston, M.D.	Sault Ste. Marie

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A. V. DeLaporte, B.A.Sc. ..... Chemist in Charge of Experimental Station
A. E. Berry, M.A.Sc. ..... Assistant Engineer

Division of Laboratories

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Charles M. Anderson, M.D., C.M., C.P.H. ..... Bacteriologist
A. H. Bonham, B.A.Sc. ..... Chemist

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J. W. Hunt, M.B., L.R.C.P., M.R.C.S.....Clinical Specialist
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N. C. Sharpe, B.A., M.B.....Clinical Specialist

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Beryl Knox.....Associate Director
Marjorie Burgess, B.A.....Statistician
Wm. J. Bell, M.B.....Pediatrician

Division of Epidemiology

Consulting Staff

Public Health Administration.....J. G. Fitzgerald, M.D., F.R.S.C.
Pediatrics.....Alan Brown, B.A., M.B.
Obstetrics.....B. P. Watson, M.D., F.R.C.S. (Edin.)

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ANNUAL REPORT

OF THE

Provincial Board of Health for the Province of Ontario

For the Year Ending the 31st of December, 1921

RESUMÉ OF THE TRANSACTIONS OF THE BOARD BY THE CHIEF OFFICER OF HEALTH.

This is the fortieth Annual Report of the Provincial Board of Health for the year ending 31st December, 1921.

During the year there were four meetings of the Board, at which all the members were present.

Legislation.

In the Session of 1921 the following public health legislation was passed:

2. Section 21 of The Public Health Act is repealed and the following section substituted therefor:—

21. The council of a township may, by by-law, provide for the payment to each member of the local board and to the secretary, of a sum not exceeding $4 for every attendance at meetings of the board and his necessary travelling expenses in going to and returning from such meetings.

3. Section 35 of The Public Health Act is amended by adding thereto the following subsections:—

(3) The council of a city having a population of 100,000 or over may appoint an assistant medical officer of health, or more than one assistant medical officer of health, who shall act under the direction of the medical officer of health and, while so acting, shall have all the powers and perform the same duties as the medical officer of health.

(4) The council of a township, with the approval of the Provincial Board of Health, may appoint for any stipulated time more than one medical officer of health for the township and may limit the territory within which each of such officers shall act, and every such medical officer of health shall, within the territory for which he is appointed, have and perform the powers and duties of a medical officer of health as set out in this Act or in any by-law passed thereunder and in force in the municipality.

4. Section 94 of the Public Health Act, as amended by section 17 of The Statute Law Amendment Act, 1914, and as further amended by section 10 of The Public Health Amendment Act, 1918, is further amended by adding thereto the following subsection:—

(16) Where a sewage disposal plant or any connection therewith is constructed by an urban municipality in a township, the council of the urban municipality and the council of the township may enter into an agreement for the connecting with and use of such sewage disposal plant or connections by the township municipality and residents thereof on such terms as may be mutually agreed upon.

Regulations.

The following Regulations were passed by the Board during the year. These Regulations were approved by Order-in-Council and published in *The Ontario Gazette* on the 19th day of May, 1921.

REGULATIONS FOR THE SANITARY CONTROL OF LUMBER AND TIMBER CAMPS SITUATED IN THE UNORGANIZED TERRITORY

EMPLOYERS TO NOTIFY PROVINCIAL BOARD OF HEALTH OF ESTABLISHMENT OF EACH CAMP FORTHWITH AND ANNUALLY.

SECTION 1.—Every employer of labour on any work of lumbering, wood cutting or cutting of timber for any purpose in any portion of the unorganized districts without municipal organization *shall,* upon the establishment of each and every camp, forthwith, notify the Provincial Board of Health of the establishment of the camp, and shall before the commencement of each season's work forward to the said Board replies to the following questions, viz.:

(1) List of proposed camps and location of each.
(2) Name of foreman in each camp.
(3) Means of access to each camp.

(4) Average number of men in each camp.
(5) Name and residence of physician contracted with and whether located in camp or not.
(6) Date of contract and its duration.

(7) Whether contract is under section 2 only, or under 2 and 3. If the latter the employer shall state the amount of fee paid for sanitary supervision as well as amount deducted from each man's pay monthly for physician's fee covering medical service.

(8) Whether a permanent hospital is provided in camp or in the district.

ALL EMPLOYERS TO CONTRACT WITH PHYSICIANS FOR SANITARY SUPERVISION, MONTHLY INSPECTION AND REPORT UPON CAMPS.

SECTION 2.—Every employer of labour, for any work referred to in the preceding section, shall contract with a legally qualified physician for the sanitary supervision and inspection of all camps, works or premises under his control. The contract shall provide for inspection at least once a month or as often as required by the Provincial Board, and shall state plainly the amount of fee or remuneration to be paid by the employer to the physician. The physician under contract shall forthwith report in writing to the Provincial Board the result of his inspection. The report shall include (1) the type or plan of camp in use whether of Class "A," "B," or "C" or a combination of these as set out in these Regulations. (2) A description of the location or site with the distance clearly indicated between the camp and any adjacent water such as a river, stream or lake, (3) the condition of the various buildings in the camp, (4) the water supply and drainage, (5) a plan of the camp showing relation of any adjacent water.

In case of dispute between the physician and the company as to the fee herein referred to the amount of fee shall be settled by the Provincial Board, whose decision shall be final.

LUMBERMEN MAY CONTRACT WITH PHYSICIANS FOR MEDICAL AND SURGICAL CARE OF EMPLOYEES: THEY MAY DEDUCT FROM WAGES OF EMPLOYEES A SUM NOT EXCEEDING $1 PER MONTH.

SECTION 3.—Every employer of labour in a lumber camp or works, as set out in section 1, may contract with one or more legally qualified physicians for the medical and surgical care of his employees and for the payment of such services may deduct from the pay due any employee a sum not exceeding $1 per month. This sum shall be paid to the physician or physicians so contracted with, without rebate or deduction. Every such physician shall supply medical attendance and medicine to the employees. Every employer *who does not so contract* for medical and surgical services shall

be responsible for the medical and hospital care as well as for the maintenance of each and every employee taken ill while in his employ. He shall incur a like responsibility for each and every case of sickness which develops in an employee after quitting his service, or after being discharged from his employ when, in the opinion of the Provincial Board, the origin of such sickness is traceable to the period of such employment, or to an accident to an employee occurring while in his employ, when the sick or injured person is unable to pay, or does not pay, for the same. The apportionment and adjustment of the payment of expenses so incurred shall be determined in accordance with section 118, subsection 3 of the Public Health Act.

COPY OF CONTRACT TO BE FORWARDED TO PROVINCIAL BOARD, WHICH FOR REASONS MAY REQUIRE CHANGES IN MANNER HEREIN SET FORTH.

Section 4.—Every employer of labour on all works in the unorganized districts without municipal organization, as set out in preceding sections shall transmit to the Provincial Board before beginning work in camps or premises, copies of contract covering the sanitary supervision of all camps, works or premises, as well as copy of agreement for medical and surgical care of employees as set forth in section 3. These contracts and agreements must be signed by both contracting parties, duly witnessed. Notice of any subsequent change of physician or terms of contract must be filed with the Provincial Board within one month after such change has been effected.

Should it appear to the Provincial Board that owing to the distance of the residence of the physician employed from the camps the best interests of the employees are not likely to be served, it shall be competent for the said Board with the approval of the Minister to require the employer of labour to contract with some physician residing at or near the works of the company. Should it at any time appear, owing to the distance of physician from the camps, or to neglect or other cause on the part of the company or physician employed, that an employee has been put to expense to secure medical assistance for sickness or accident other than employer's physician, the employer and physician shall be held responsible for the payment of a reasonable fee for such services. The amount to be paid in such instances shall be determined as provided by section 118, subsection 3, of the Public Health Act.

OWNER, MANAGER, ETC., RESPONSIBLE FOR CARRYING OUT OF REGULATIONS AND HEALTH ACT.

SECTION 5.—Every employer of labour under these Regulations shall be held to mean the Owner, Manager, Agent, Contractor, Subcontractor or Foreman of any Lumbering Camp, Wood-cutting Camp or concern engaged in the manufacturing of wood products and located in any portion of the unorganized districts without municipal organization, and shall be responsible for the enforcement of every regulation herein contained, and of any section of the Public Health Act governing in any case or circumstances.

THE SAME MEASURES TAKEN BY LOCAL HEALTH AUTHORITIES TO BE ADOPTED BY EMPLOYERS, AGENTS, ETC., IN THE CASE OF COMMUNICABLE DISEASES.

SECTION 6.—Every measure required to be taken by a Local Board of Health or Medical Officer of Health, Sanitary Inspector or other Health Officer under the Public Health Act, or under any Regulation made by the authority of the Act in any organized municipality must be taken by the employer and the employees or agents and by the physician employed by them whenever any insanitary condition or any communicable disease or suspected communicable disease referred to in the said Public Health Act or Regulations is found in any camp or premises, to which these Regulations apply. The said employer, manager, foreman, agent or physician employed shall be subject to the same penalties as any of the aforesaid Health Officers.

PROVINCIAL BOARD TO BE NOTIFIED FORTHWITH OF EACH AND EVERY CASE OF COMMUNICABLE DISEASE.

SECTION 7.—Should any communicable disease or suspected communicable disease as defined by the Public Health Act or Regulations break out in any camp, works or premises, the employer or his employees or agent in charge shall immediately send *notice to the physician employed*, who shall at once notify the Provincial Board of the outbreak, and take the necessary steps to control the disease.

In all respects the employer, his employees or agent in charge of any camp, works or premises, shall be held to be in the same position as regards the occurrence of communicable disease therein as a householder, and shall conform to Public Health Act and Regulations in respect to such communicable disease.

EMPLOYEES IN CAMPS TO FURNISH CERTIFICATE OF VACCINATION UPON REQUEST OF PROVINCIAL OFFICER.

SECTION 8.—Every employee in a lumbering or other camp shall, when requested to do so by the Provincial Board of Health, furnish the foreman or other person in charge of the camp with a certificate of successful vaccination or re-vaccination within the immediate preceding seven years. The said Board, by its inspector or officer, shall forthwith quarantine such camps or works until such certificate has been furnished by each and every employee in the said camp or camps.

TWO CLASSES OF HOSPITALS MUST BE PROVIDED BY ALL EMPLOYERS.

SECTION 9.—Every employer in a camp shall provide the following classes of hospitals, viz.:

(1) An Isolation Hospital consisting of a building or a tent as may be approved by the Provincial Board.

(2) A general hospital for sick or injured employees, of a type approved by the Provincial Board.

SITE OF CAMP, BUILDINGS, ETC., TO BE APPROVED BY THE PROVINCIAL BOARD.

SECTION 10.—The location of a camp, works or premises shall be made with due regard to its healthfulness, and no camp shall be located or erected nearer than 100 feet to any lake, stream, or other water, except with the written consent of the Provincial Board of Health.

PROVISIONS AS TO AIR SPACE, LIGHTING, ETC.

SECTION 11.—Every camp occupied by employees shall contain 400 cubic feet of air space for every occupant thereof and shall further be provided with sufficient ventilation as set forth and described in specifications to be found in section 18 of these Regulations.

METHOD OF VENTILATION TO BE APPROVED.

SECTION 12.—The method of ventilation shall be as indicated in the plans and specifications hereinafter set out.

COLLECTION OF GARBAGE, MANURE AND NIGHT SOIL.

SECTION 13.—When metal garbage receptacles are not available, a sloop or jumper with a covered box may be used for the collection and removal of manure and night soil. These shall be collected and conveyed daily to a suitable place of disposal and there buried or burnt.

DISTANCE AND DIRECTION OF STABLES FROM COOK-HOUSE AND SLEEP CAMPS.

SECTION 14.—The stables in connection with a camp or works must be so located as not to contaminate the water supply or drain to any water. They shall conform to the distance set forth in the plans A, B, C, or combination. This distance may be increased if thought necessary by the Inspector or Officer of the Provincial Board. All stable manure shall be collected in the manner provided in section 13, and may be disposed of by burning or by spreading out upon the land in a thin covering at a reasonable distance from buildings or water supply to the satisfaction of the Board.

PRINTED COPIES OF REGULATIONS TO BE FORWARDED BY BOARD AND KEPT ON FILE IN OFFICE.

SECTION 15.—Copies of these Regulations shall be furnished every employer of labour by the Provincial Board upon request, and a copy shall be kept on file in the office of each clerk of the works for the use of the employees.

BOARD MAY ENFORCE REGULATIONS AT EXPENSE OF EMPLOYER.

SECTION 16.—Should the Provincial Board on complaint or otherwise find that any of these Regulations are not compiled with, the Board or its Inspector shall, when necessary, take steps to enforce these Regulations. The expense of such inspection and enforcement shall be paid by the employer or his agent responsible for the violation of the Regulations as provided under section 118, subsection 3, of the Public Health Act.

THE SANITARY SUPERVISOR (TENURE OF OFFICE).

Section 17.—After a contract is made between an employer and a physician, as provided for in section 2 of these Regulations, the physician may not be dismissed by the employer without the approval of the Provincial Board. Should it appear to the Board that the physician is not fulfilling his contract, the contract may be cancelled by the Board and the employer required to make a new contract with some other legally qualified physician.

SPECIFICATIONS, DETAILS AND PLANS OF CAMP CONSTRUCTION.

Section 18.—Every employer of labour on any of the works referred to in the preceding sections shall, in every camp constructed or renewed after July 1st, 1921, conform to one or other of the classes of standard camps and specifications governing the same and which are hereinafter set forth. All camps and works which may then be in existence and which, in the opinion of the Provincial Board, could be used for a further period may be permitted to operate, provided the same comply reasonably with the Regulations approved by the Lieutenant-Governor in Council on the 10th day of August, 1912, but no camp constructed under the latter Regulations shall be permitted to be used after January 1st, 1923.

Standard Camps.

The plans of Standard Camps included in these Regulations and referred to as Classes "A," "B" and "C" and combination shall be a part of these Regulations.

Class "A" Capacity 100 Men.

Material and Construction.—The buildings may be constructed of logs or of lumber. If of the former, the spaces between logs must be flushed up with mortar (chinking with moss will not be permitted).

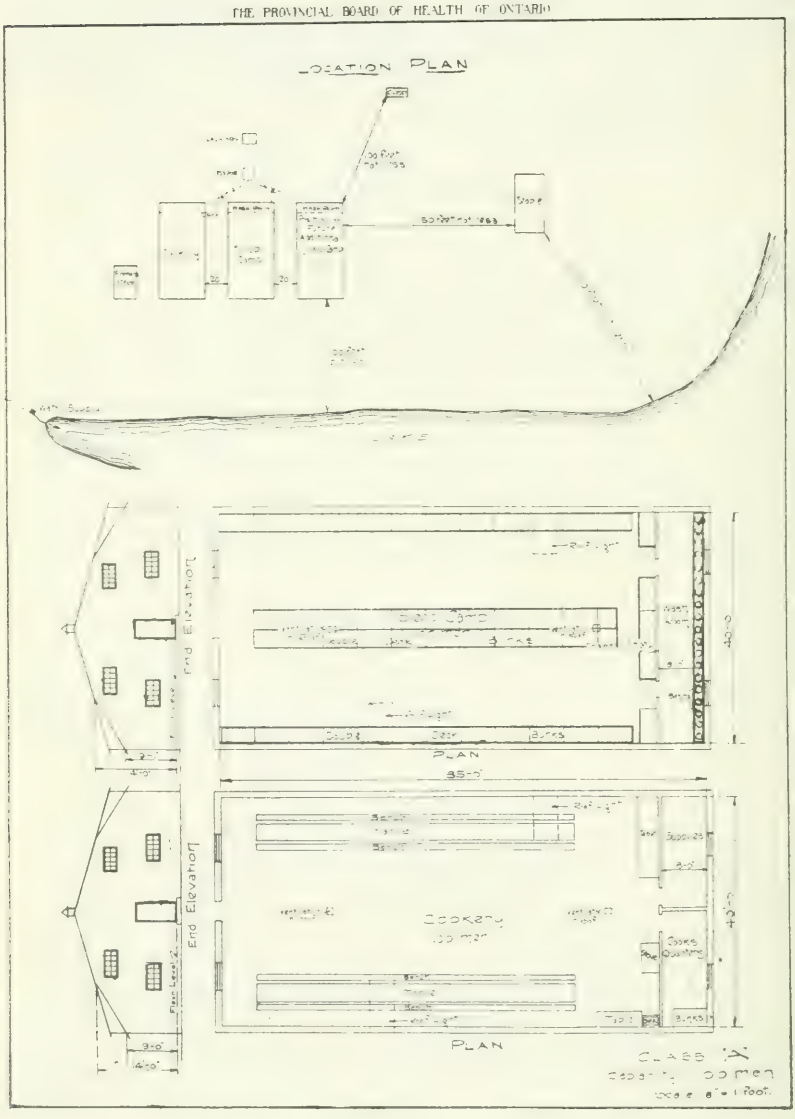
Roofs and Floors.—All roofs and floors are to be constructed of tight lumber (poles of any kind will not be permitted).

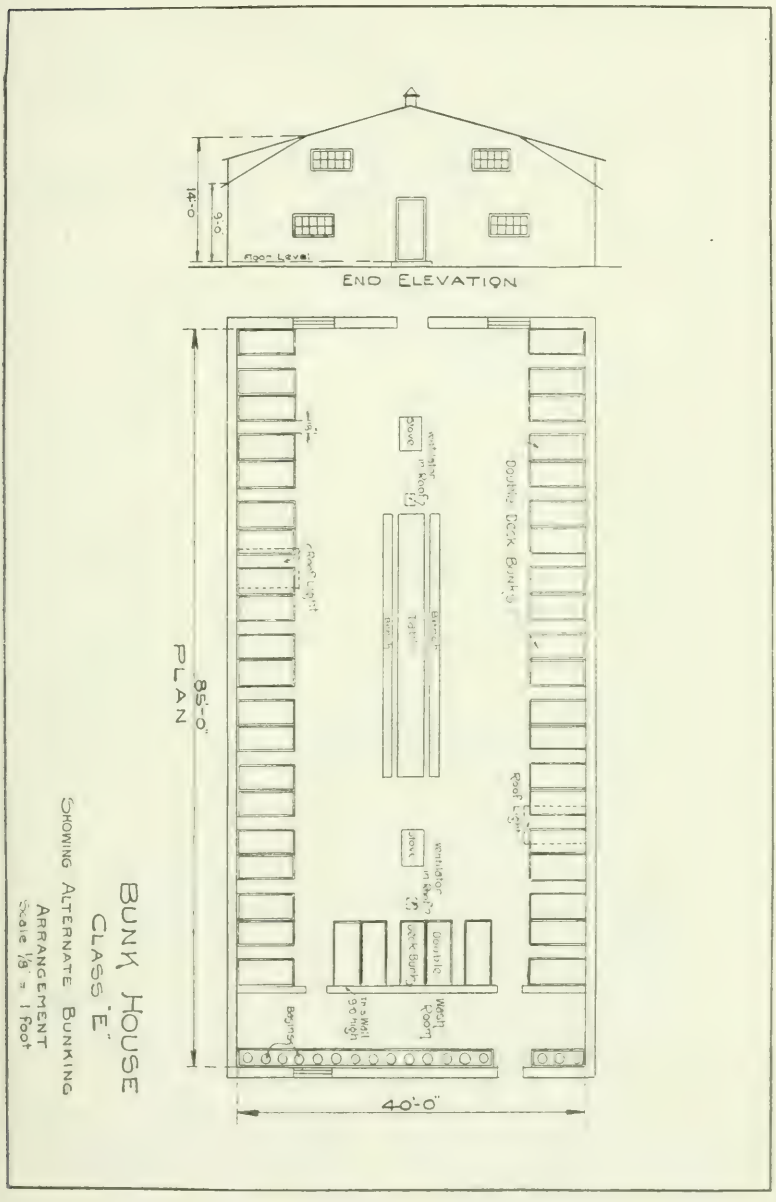
Window Lighting.—There shall be ten windows; four are to be placed in each gable as per plan. Each of these windows shall contain at least nine square feet of glass, and in addition two dormer windows shall be placed in the roof in position as set forth in the plan. Each of these roof windows shall contain at least ten square feet of glass. All roof windows shall be hinged or hung on pivots with a pull cord attached in order that they may be readily opened and closed.

Ventilation.—There shall be three roof ventilators placed as shown in the plan. These shall have openings of at least twelve inches square and shall be equipped so that they may be opened and closed by a pull-cord. Fresh air inlets are to be constructed as shown in the

plan. The fresh air inlets shall be protected at each end by a wire screen and shall not be less than six inches by six inches.

Bunks and Bedding.—The bunks shall be single double-deck bunks. These may be constructed of iron or of wood, but must be arranged in position as shown in plan "A" or plan "E." The former provides bunks parallel with the walls and the latter at right angles to the walls. Should the plan at right angles to the walls be preferred, a passage-way of at least eighteen inches shall be provided between each pair of bunks. Each pair shall be further divided by a partition of at least eighteen inches in height from the top of the bunk to prevent contact between occupants.


THE PROVINCIAL BOARD OF HEALTH OF ONTARIO
LOCATION PLAN
End Elevation
PLAN
35-0
Cookery
End Elevation
PLAN
CLASS 'A'



THE PROVINCIAL BOARD OF HEALTH OF ONTARIO

Ticks or mattresses and clean blankets shall be furnished to each employee when entering camp.

White-washing Interiors.—All camps and buildings after having been in use for *one season* shall be treated with a coat of lime-wash at the beginning of each season.

Storage and Cooks' Quarters.—A section of the cookery building shall be partitioned off, and subdivided, to provide quarters for the cooks' staff. A room for the storing of perishable foodstuffs shall be provided. The requisite number of sinks and table accommodation, as shown in the plan, shall be provided. Doors shall be hung at entrance to the cooks' quarters and the store-room.

Wash-room and Bunkhouse.—A wash-room with the number of basins, as shown in the plan, shall be provided. Doors shall be hung at the entrance as in the case of the cook's quarters.

Laundry.—If a public laundry, satisfactory to the Provincial Board, is not available, a laundry building is to be provided as shown in the plan. The laundry shall contain a built-in or iron boiler, together with laundry tubs as shown in the plan. Windows are also to be constructed as shown.

Drainage.—Drainage from all sinks and wash basins shall be conveyed to a covered cesspool as shown, said cesspool to be located at least fifty feet from any building or at a greater distance if required by the Provincial Board.

Closets.—Closets are to be provided as shown. These are to conform to the standard plan save that it may be optional whether an open or closed seat is used. Closets used in connection with summer camps shall be made fly-proof.

This camp is designed to meet the requirements of lumbermen desiring to use camps three years or over, and is also suitable as a depot or headquarters camp. Although designed to house 100 men, it is optional with the builder whether he house the total in one camp as shown, or prefers to construct two camps as shown on plan "B." The Half Mansard Roof shown provides a greater cubic air space than the ordinary pitch roof.

Class "B," Capacity 50 Men.—This camp is similar to Class "A" except that the roof is of the straight or pitch type, and that only three windows are provided in the gable ends instead of four.

The same features respecting laundry closets and ventilation are required for this camp as for Camp "A."

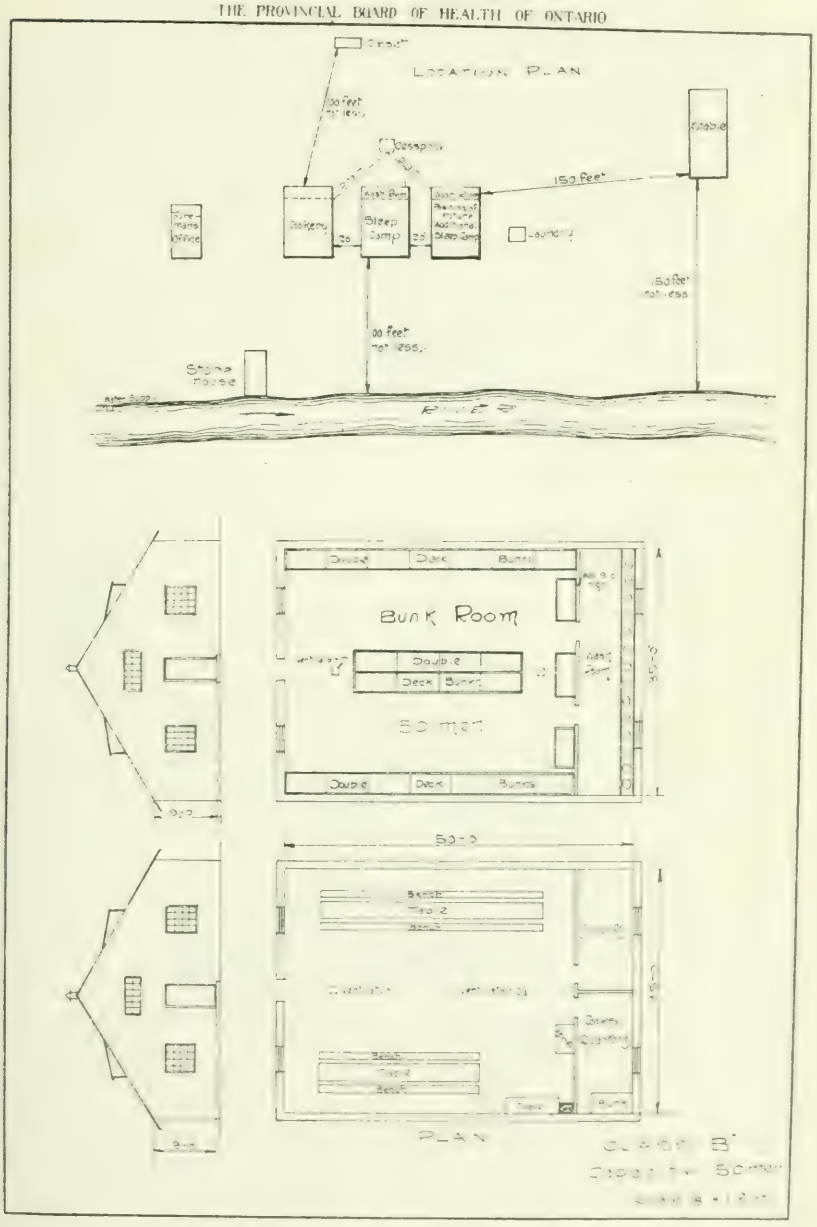
The principal reason for this design it to cater to concerns who prefer to house 100 men in two buildings rather than in one large camp, such as shown in Class "A." The specifications attached to plan "A" shall be used in connection therewith.

Class "C," Capacity 26 Men.—The camp shown in plan "C" has been designed to house twenty-six men. In every respect this building is similar to those shown on plan "B" save that no laundry is provided. The specifications accompanying plan "A" shall apply to this class of camp.

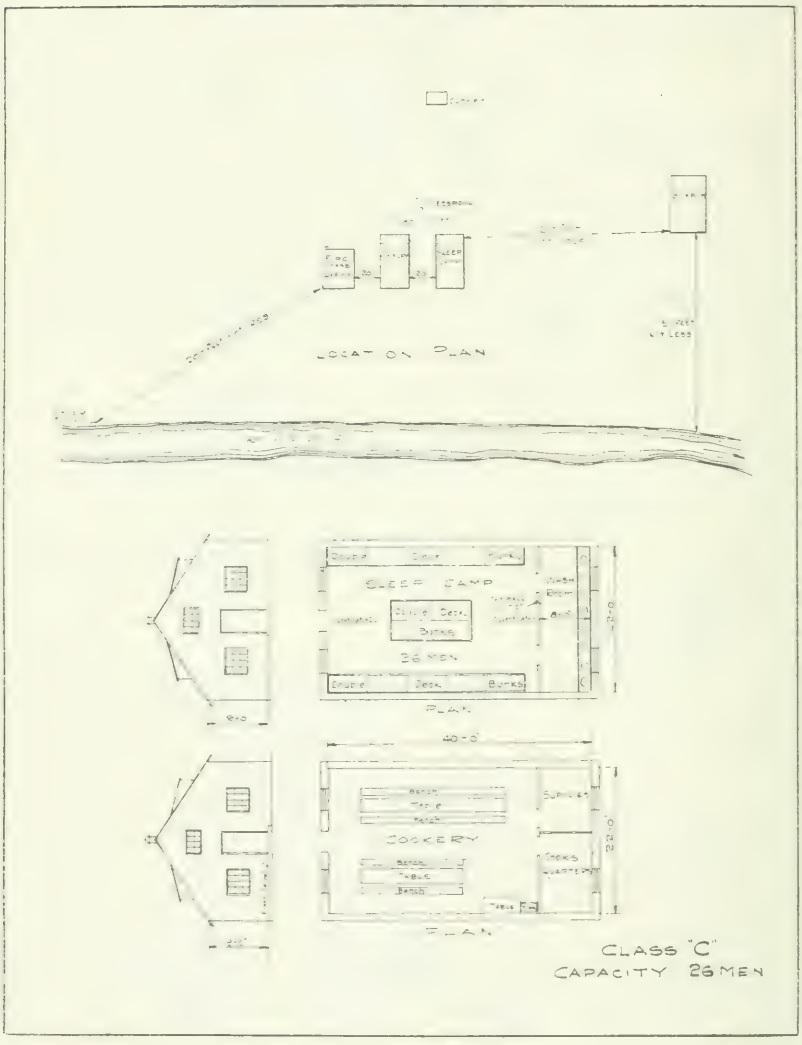
Drainage.—All waste water from sinks or basins is to be conveyed to covered cesspool, as set out in specification covering plan "A."

Closets.—All closets are to conform to specifications set out and covering plan "A."

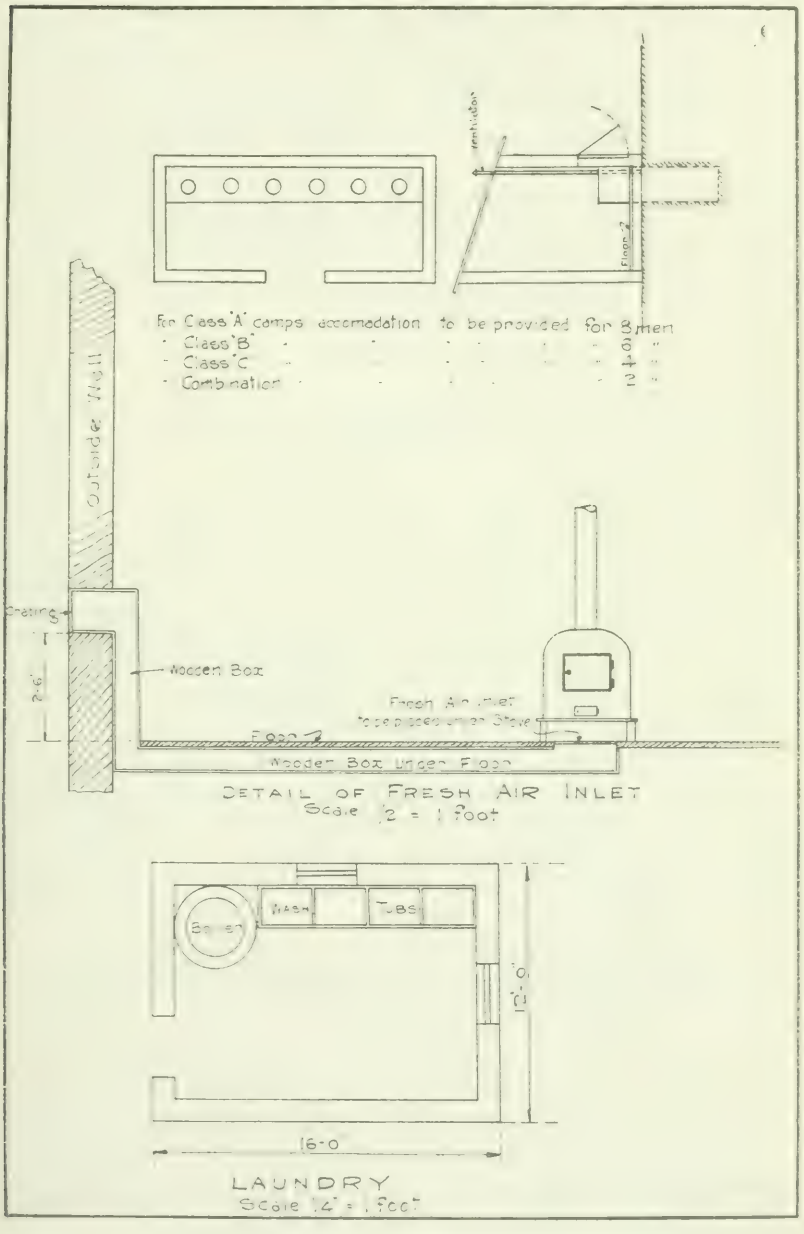
THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



Combination Camp.—This camp has been designed to meet the requirements of Pulp and Paper Companies, who as a rule contract out small blocks of timber to jobbers. The jobbers operate for the most part with crews of from eight to fifteen men, with an average of ten. This class of jobber has in the past invariably brought his wife and family to the woods and has constructed small camps far below the average logging camp. In fact the buildings constructed by these jobbers have in the past been of the most unsanitary type; hence the necessity for the creation of a small standard building combining the best sanitary principles at the minimum cost.

The number of men housed in this type of camp must not exceed fifteen. Should the operator require a larger crew, then one of the other types or classes of camp shall be used. The idea intended to be conveyed by this small camp, constructed under one roof is for the purpose of offering a small structure embodying most of the features to be found in the larger and more expensive camps at a minimum.

Material and Construction.

The building may be constructed of logs or of lumber. If of the former, the spaces between logs must be plastered or flushed up with mortar. (Chinking with moss is prohibited.)

Roofs and Floors.—All floors and roofs are to be constructed of tight lumber. (Poles of any kind will not be permitted.)

Window Lighting.—There shall be eight windows, three are to be placed in each gable as per plan; each of these windows shall contain at least nine square feet of glass, and in addition two dormer windows be placed in the roof, as set forth in the plan. Each roof window shall contain at least ten square feet of glass. All roof windows shall be hinged or hung on joints with a pull-cord attached in order that they may be readily opened or closed.

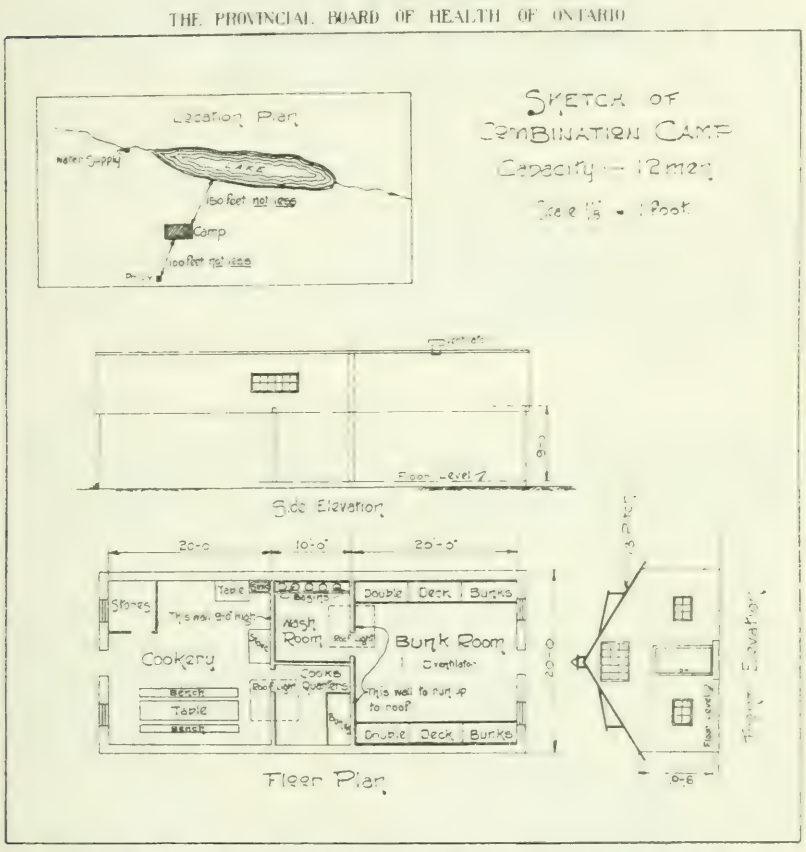
Ventilation.—There shall be two roof ventilators placed as shown. These shall have openings of at least six inches square, equipped so that they may be opened and closed by a pull-cord. Fresh air inlets are to be constructed as shown in plan. The fresh air inlet shall be protected at each end by a wire screen and shall not be less than six inches by six inches.

Bunks and Bedding.—The bunks shall be single double-deck bunks. These may be constructed of iron or of wood, but must be arranged in position as shown on Plan "A" or Plan "B." The former provides bunks parallel with the walls and the latter at right angles to the walls. Should the plan at right angles to the walls be preferred a passage way of at least eighteen inches shall be provided between each pair of bunks. Each pair shall be further divided by a partition of at least eighteen inches in height from the top of the bunk to prevent contact between occupants. Ticks or mattresses and clean blankets shall be furnished each employee when entering camp.

White-washing Interiors.—All camps or buildings after being used one season shall be treated with a coat of lime-wash at the beginning of each season.

Cooks' Quarters and Storage Room.—Provision is made for cooks' quarters and the storing of perishable foodstuffs. A door is to be hung at the entrance to cooks' quarters.

Bunk House Wash-Room.—A wash-room with the number of basins as shown in the plan shall be provided.



SECTION 19.—No modification of these regulations shall be permitted unless such modification is approved by the Provincial Board.

PENALTIES.

SECTION 20.—Any person, firm or corporation who contravenes any of the provisions of these Regulations or who wilfully disobeys or neglects to carry out any order or directions lawfully given by the Provincial Board or any Officer thereof, shall incur a penalty of not less than $5 nor more than $500, as provided by section 110, subsection 2 of the Public Health Act.

SECTION 21.—All former Regulations for the sanitary control of lumber or timber camps in unorganized territory are hereby repealed.

REGULATIONS FOR THE SANITARY CONTROL OF MINING CAMPS, SAW MILLS AND OTHER INDUSTRIES SITUATED IN THE UNORGANIZED TERRITORY

EMPLOYERS TO NOTIFY PROVINCIAL BOARD OF HEALTH OF ESTABLISHMENT OF EACH CAMP OR WORKS FORTHWITH AND ANNUALLY.

SECTION 1.—Every employer of labour in any work (other than a lumber camp) situated in any portion of the unorganized districts without municipal organization, *shall,* upon the establishment of each and every camp or works, forthwith notify the Provincial Board of Health of the establishment of the same, and annually thereafter, upon a date to be fixed, give such particulars as may be required by the said Board.

ALL EMPLOYERS TO CONTRACT WITH PHYSICIANS FOR SANITARY SUPERVISION AND MONTHLY INSPECTION, AND REPORT UPON ALL CAMPS AND WORKS.

SECTION 2.—Every employer of labour referred to in the preceding section, shall contract with a legally qualified physician for the sanitary supervision and inspection of all camps, works or premises under his control. The contract shall provide for inspection at least once a month or as often as required by the Provincial Board, and shall state plainly the amount of fee or remuneration to be paid by the employer to the physician.

The physician under contract shall forthwith report in writing to the Provincial Board the result of his inspection. The report shall include:

(1) The type or plan of a camp in use with the sizes of buildings plainly indicated.

(2) A description of the location or site with the distance clearly indicated between the camp and any adjacent water, such as a river, stream or lake.

(3) The condition of the various buildings in the camp.

(4) The water supply and drainage.

(5) A plan of the camp showing relation of any adjacent water.

In case of dispute between the physician and the company as to the fee herein referred to the amount of fee shall be settled by the Provincial Board, whose decision shall be final.

EMPLOYERS TO CONTRACT WITH PHYSICIAN FOR MEDICAL AND SURGICAL CARE OF EMPLOYEES: THEY MAY DEDUCT FROM WAGES A SUM NOT EXCEEDING $1 PER MONTH.

SECTION 3.—Every employer of labour, as set out in section 1, shall contract with one or more legally qualified physicians for the medical and surgical care of his employees, and for the payment of such services may deduct from the pay due any employee, a sum not exceeding $1 per month. This sum shall be paid to the physician or physicians so contracted with, *without rebate or deduction*. Every such physician shall supply medical and surgical attendance and medicine to the employees.

COPY OF CONTRACT TO BE FORWARDED TO PROVINCIAL BOARD, WHICH FOR REASONS MAY REQUIRE CHANGES IN MANNER HEREIN SET FORTH.

SECTION 4.—Every employer of labour on all works in the unorganized districts without municipal organization, as set out in preceding sections, shall transmit to the Provincial Board before beginning work in camps or premises, two copies of contract covering the sanitary supervision of all camps, works or premises, as well as copy of agreement for medical and surgical care of employees, as set forth in section 3. These contracts and agreements must be signed by both contracting parties, duly witnessed. Notice of any subsequent change of physician or terms of contract must be filed with the Provincial Board within one month after such change has been effected.

Should it appear to the Provincial Board that owing to the distance of the residence of the physician employed from the camps, the best interests of the employees are not likely to be served, it shall be competent for the said Board with the approval of the Minister, to require the employer of labour to contract with some physician residing at or near the works of the company. Should it at any time appear, owing to the distance of physician from the camps, or to neglect or other cause on the part of the company or physician employed, that an employee has been put to expense to secure medical assistance for sickness or accident other than employer's physician, the employer and physician shall be held responsible for the payment of a reasonable fee for such services. The amount to be paid in such instances shall be determined as provided by section 118, subsection 3 of the Public Health Act.

OWNER, MANAGER, ETC., RESPONSIBLE FOR CARRYING OUT OF REGULATIONS AND HEALTH ACT.

Section 5.—Every employer of labour under these regulations shall be held to mean the owner, manager, agent, contractor, sub-contractor or foreman of any mining camp, sawmill or other industry located in any portion of the unorganized districts without municipal organization, and shall be responsible for the enforcement of every regulation herein contained, and of any section of the Public Health Act governing in any case or circumstance.

THE SAME MEASURES TAKEN BY LOCAL HEALTH AUTHORITIES TO BE ADOPTED BY EMPLOYERS, AGENTS, ETC., IN THE CASE OF COMMUNICABLE DISEASES.

Section 6.—Every measure required to be taken by a local board of health or medical officer of health, sanitary inspector or other health officer under the Public Health Act, or under any Regulation made by the authority of the Act in any organized municipality must be taken by the employer and the employees or agents and by the physician employed by them whenever any insanitary condition, communicable disease or suspected communicable disease referred to in the said Public Health Act or Regulations is found in any camp or premises, to which these Regulations apply. The said employer, manager, foreman, agent or physician employed shall be subject to the same penalties as any of the aforesaid health officers.

PROVINCIAL BOARD TO BE NOTIFIED FORTHWITH OF EACH AND EVERY CASE OF COMMUNICABLE DISEASE.

Section 7.—Should any communicable disease or suspected communicable disease as defined by the Public Health Act or Regulations break out in any camp, works, or premises, the employer or his employees or agent in charge shall immediately send notice to the physician employed, who shall at once notify the Provincial Board of the outbreak and take the necessary steps to control the disease.

In all respects the employer, his employees or agent in charge of any camp, works or premises, shall be held to be in the same position as regards the occurrence of communicable disease therein as a householder, and shall conform to the Public Health Act and Regulations in respect to such communicable disease.

EMPLOYEES IN CAMPS TO FURNISH CERTIFICATE OF VACCINATION UPON REQUEST OF PROVINCIAL OFFICER.

SECTION 8.—Every employee in any mining camp, sawmill or other industry, shall, when requested to do so by the Provincial Board of Health, furnish the foreman or other person in charge of the camp with a certificate of successful vaccination or re-vaccination within the immediate preceding seven years. The said Board by its inspector or officer shall forthwith quarantine such camps or works until such certificate has been furnished by each and every employee in the said camp or camps.

TWO CLASSES OF HOSPITALS MUST BE PROVIDED BY ALL EMPLOYERS.

SECTION 9.—Every employer in a camp shall provide the following classes of hospitals, viz.:

(1) An isolation hospital consisting of a building or a tent as may be approved by the Provincial Board.

(2) A general hospital for sick or injured employees, of a type approved by the Provincial Board.

SITE OF CAMP, BUILDINGS, ETC., TO BE APPROVED BY THE PROVINCIAL BOARD.

SECTION 10.—The location of a camp, works or premises shall be made with due regard to its healthfulness, and no camp shall be located or erected nearer than 100 feet to any lake, stream or other water except with the written consent of the Provincial Board of Health.

PROVISIONS AS TO AIR SPACE, LIGHTING, ETC.

SECTION 11.—Every camp occupied by employees shall contain four hundred (400) cubic feet of air space for every occupant thereof. The floor shall be constructed of boards or of planks or other material equally suitable for the purpose of every such camp, other than a temporary tent, not exceeding in size ten feet by fifteen feet, shall be supplied with adequate lighting. In all wooden or iron structures, the windows must be constructed so that they may be opened when necessary.

METHOD OF VENTILATING TO BE APPROVED.

SECTION 12.—The method of ventilation of any camp or premises in which a stove or furnace is used shall be such as will satisfy the Inspector or Officer of the Provincial Board. The temperature of the room should be maintained at from 60 to 65 deg. Fahr.; a shallow pan supplied with water shall be kept on the stove or furnace to supply air moisture.

WASH-HOUSE, LAUNDRY AND BATH.

SECTION 13.—Every camp, works or premises coming under these Regulations shall be equipped with a separate building, to be used as a wash-house or laundry, and attached thereto, a room or, if preferred, a separate building, equipped with a stove and tubs for bath purposes. Such building or bath-house shall be satisfactory to the Provincial Board.

SEPARATE KITCHEN WITH DINING ROOM TO BE PROVIDED.

SECTION 14.—Every camp, works or premises shall be supplied with a building or tent properly constructed and equipped, and set apart as a kitchen or cook-house, and having a dining-room or eating-room in connection therewith, with proper conveniences for the cleanliness and comfort of the employees, and shall be satisfactory to the Provincial Board.

REFUSE TO BE COLLECTED AND REMOVED IN BUCKETS.

SECTION 15.—Proper sanitary buckets shall be provided into which all refuse, whether liquid or solid, shall be placed; these, when full, must regularly be removed to a safe distance from the kitchen and be so disposed of as not to create a nuisance or contaminate the drinking water. A properly constructed drainage system, satisfactory to the Provincial Board may be utilized in lieu of slop buckets.

LATRINES OR EARTH CLOSETS TO BE KEPT CLEAN.

SECTION 16.—When regular water-flushed closets are not provided, latrines, earth or other closets are to be used. These are to be located, constructed and kept in a sanitary manner, and they must also be made fly-tight, to the satisfaction of the Provincial Board and the medical officer of the camps.

DISTANCE AND DIRECTION OF STABLES FROM COOK-HOUSE AND SLEEP CAMP.

SECTION 17.—The stables in connection with every camp works or premises must be so located as not to contaminate the water supply or drain to any water. They shall be situated at least 150 feet distant from the cook-house and men's sleeping quarters and a like distance from the river, stream or other waters upon which the camp may be situated. All stable manure shall be collected in a sloop or jumper and hauled to point of disposal daily.

Manure may be disposed of by burning or by spreading out upon the land in a thin covering at a reasonable distance from buildings or water supply to the satisfaction of the Provincial Board.

IN MINES OF 100 FEET IN DEPTH, PORTABLE PRIVIES ARE REQUIRED.

SECTION 18.—In mines of a depth of 100 feet or over, or with drifts of 300 feet or over, portable closets satisfactory to the Provincial Board, for the use of the employees, shall be provided.

PRINTED COPIES OF REGULATIONS TO BE FORWARDED BY BOARD AND KEPT ON FILE IN OFFICE.

SECTION 19.—Copies of these Regulations shall be furnished every employer of labour by the Provincial Board upon request, and a copy shall be kept on file in the office of each clerk of the works for the use of the employees.

BOARD MAY ENFORCE REGULATIONS AT EXPENSE OF EMPLOYER.

SECTION 20.—Should the Provincial Board on complaint or otherwise find that any of these Regulations is not complied with, the Board or its Inspector shall, when necessary, take steps to enforce these Regulations. The expense of such inspection and enforcement shall be paid by the employer or his agent responsible for the violation of the Regulations, as provided under section 118, subsection 3 of the Public Health Act.

THE SANITARY SUPERVISOR (TENURE OF OFFICE).

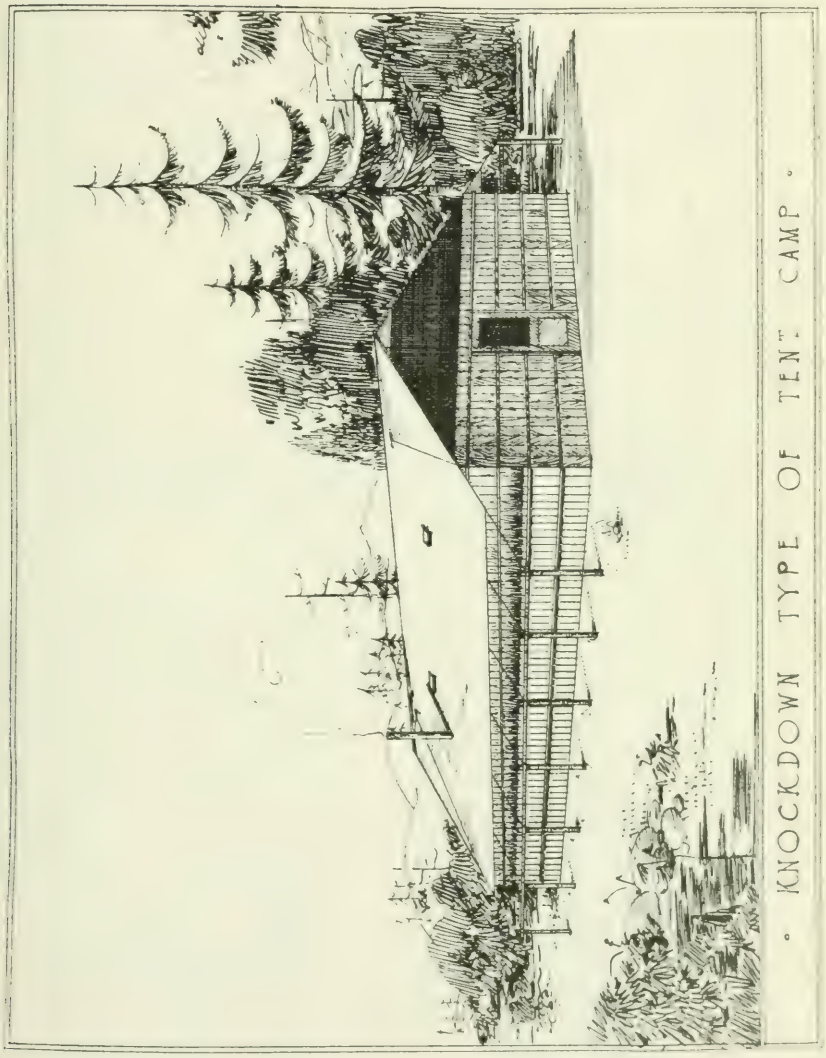
SECTION 21.—After a contract is made between an employer and a physician, as provided for in sections 2 and 3 of these Regulations, the physician may not be dismissed by the employer without the approval of the Provincial Board. Should it appear to the Board that the physician is not fulfilling his contract, the contract may be cancelled by the Board and the employer required to make a new contract with some other legally qualified physician.

SECTION 22.—No modification of these Regulations shall be permitted unless such modification is approved by the Provincial Board.

PENALTIES.

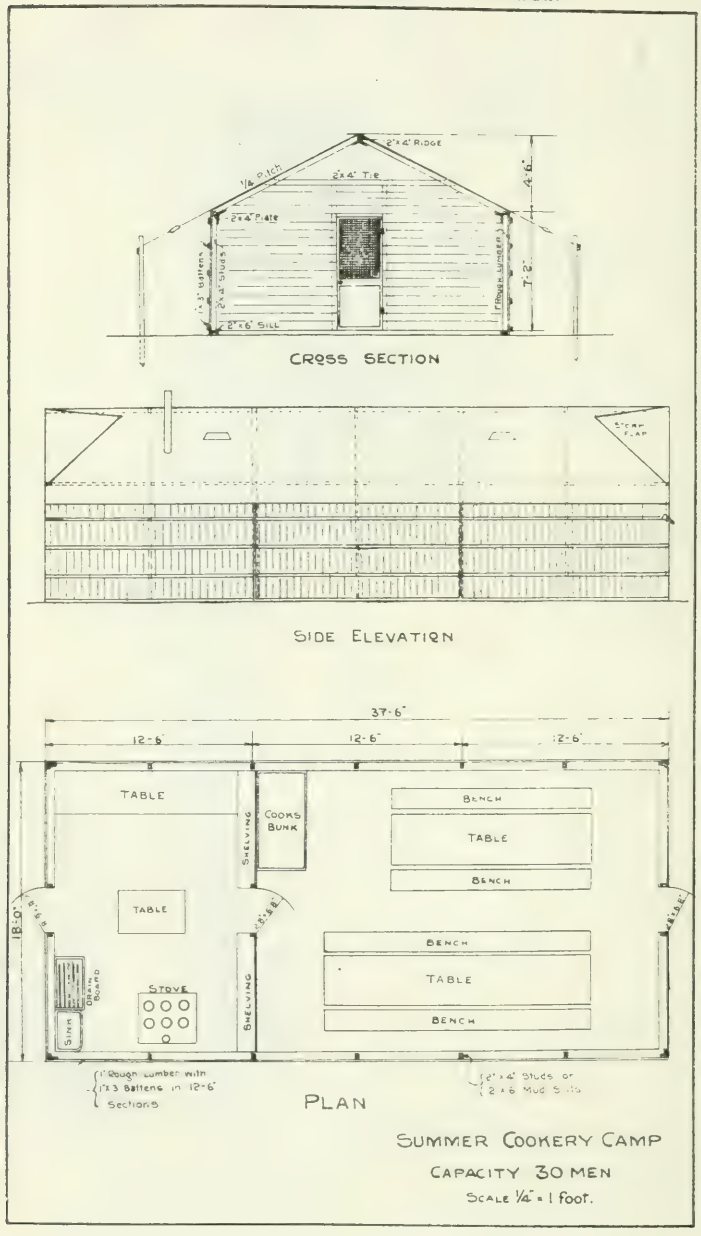
SECTION 23.—Any person, firm or corporation who contravenes any of the provisions of these Regulations or who wilfully disobeys or neglects to carry out any order or direction lawfully given by the Provincial Board or any officer thereof, shall incur a penalty of not less than $5 nor more than $500 as provided by section 110, sub-section 2, of the Public Health Act.

SECTION 24.—All former Regulations for the sanitary control of mining camps, sawmills and other industries situated in unorganized territory are hereby repealed.

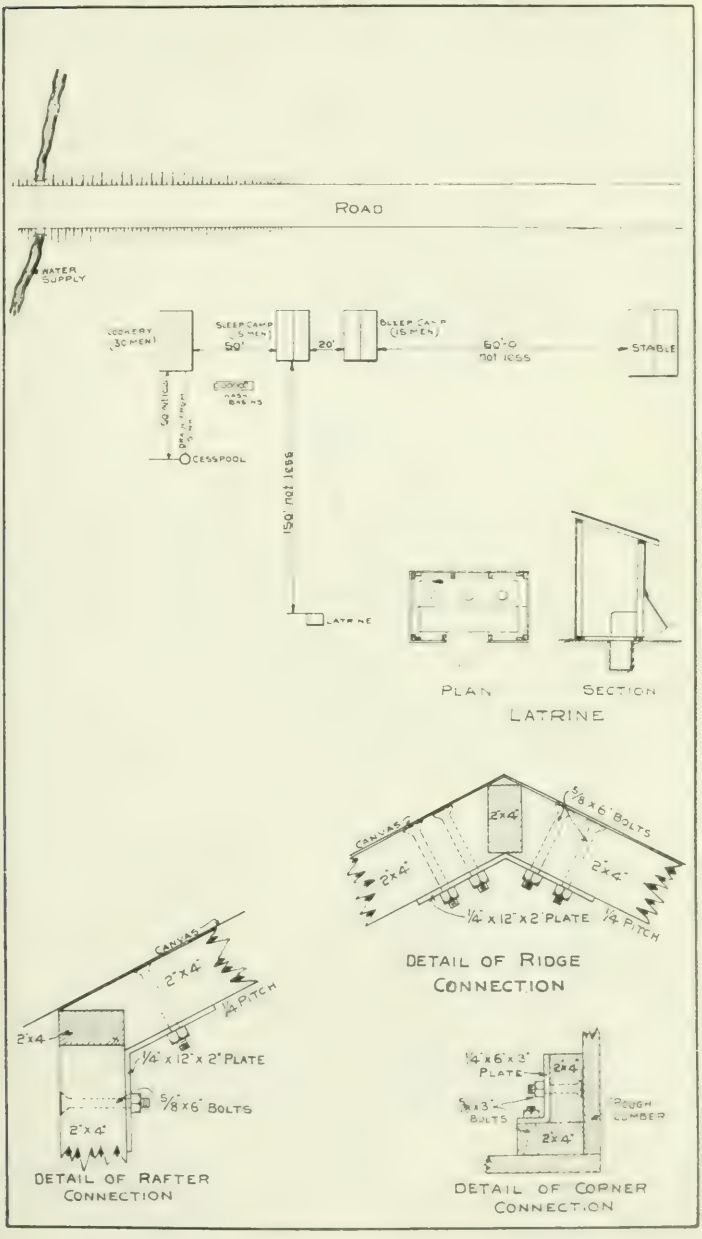


KNOCKDOWN TYPE OF TENT CAMP.

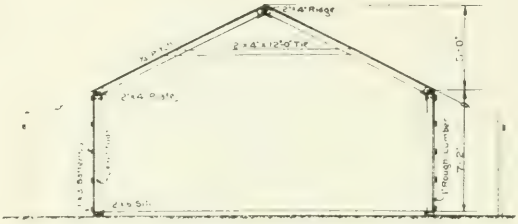
THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



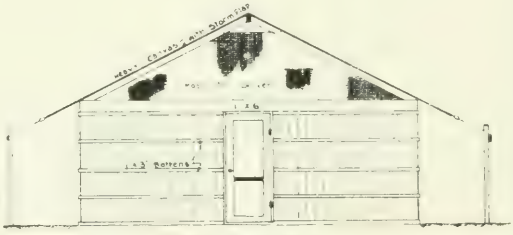
THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



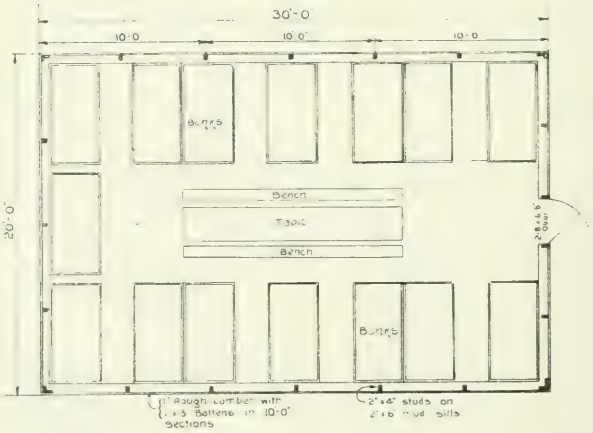
THE PROVINCIAL BOARD OF HEALTH OF ONTARIO



CROSS SECTION



FRONT ELEVATION
with Canvas Storm
Flap removed



PLAN

SUMMER SLEEP CAMP
CAPACITY 15 MEN
Scale 1/4 = 1 foot

THE WORK OF THE PROVINCIAL BOARD OF HEALTH.

The Annual Report of last year included a summary of the organization of the Board and of its work for the ten years previous to 1920 with a brief account of the early history of public health in Canada.

Herewith follows a sketch of the work of the various divisions for the present year. This account will be given in greater detail by the heads of the various divisions.

In 1921 the Board, which had entirely outgrown its old quarters in the Parliament Buildings and (for the Laboratories) at No. 5 Queen's Park, moved to Spadina House where in the one premises are housed the various divisions of the Board, including the bacteriological and chemical laboratories and the Registrar-General's Department (births, marriages and deaths records). In these quarters there will be ample room for development for some years to come, the administration will be easier, and in airy and healthy surroundings it is confidently expected that the public health interests of the province will continue to advance.

Division of Laboratories.

The facilities of this Division were further improved in 1921 by the establishment of two additional branch laboratories, the one at Owen Sound and the other at Peterborough. The work of our eight laboratories is generally as follows:

(1) Preparation of Phenarsenamine (606) one of the best known remedies for Syphilis. This preparation is distributed free of cost to hospitals, clinics, local boards of health and to physicians for the use of poor patients. It is manufactured, including overhead expense of every kind, at a lower price than it has been found possible to purchase a preparation of this kind. Supplied as it is *free* to the public *it is a direct contribution for the public relief.*

(2) Examination of specimens for diagnosis.

All the laboratories supply free to the physicians and the public as the case may be, reports upon specimens of sputum (tuberculosis), blood (typhoid and syphilis), swabs (diphtheria), smears (gonorrhoea, anthrax, etc.), milk, water, sewage, foods, contraband liquor, and such institutional supplies as soaps, coal, paints, disinfectants, etc. As these reports are of the highest value in affording assistance in the early diagnosis of disease, as well as for the purpose of protecting the government against the illegal trade in liquor, and fraud in respect to supplies purchased, it forms a *second direct contribution* to the public relief.

(3) Distribution of vaccines, serums and antitoxins is made from Toronto and from each of the branch laboratories of the Board to physicians, boards of health, hospitals and, when required, to the general public. The cost of the purchase or preparation of these products is about $80,000, purchase being made at a very low cost. As these preparations are entirely free to the public this service is a *third direct source of relief to the public.*

Division of Sanitary Engineering.

The Division maintains in Stanley Park, Toronto, an Experimental Station, where research work and experiments with the latest devices for the purification of water and the disposal of sewage are carried on. The division maintains an engineering, chemical and laboratory force for investigation and reports upon the sanitary condition of municipalities, thus affording the Board the information necessary to determine what are the needs of municipalities in respect to water and sewerage facilities, and a basis for determining action in respect to the plans and specifications of these facilities brought before the Board for approval. It may be of interest to point out that in 1910 there were but eight water purification plants and one chlorination plant in Ontario. In the present year 42% of the public water supplies in Ontario are protected by filtration and over 82% by chlorination. Twelve years ago the typhoid death rate in the cities of Ontario was 51.3 per 100M; to-day this rate is 4.3 per 100M. As it is well known that impure water is the greatest vehicle we have in the transmission of typhoid fever, the significance of the improvement in public water becomes apparent. The service of the engineering division in its efforts to improve these supplies may thus be considered as one of no inconsiderable value to the public.

Division of Child Hygiene and Public Health Nursing.

The Board has eighteen nurses engaged in giving demonstrations illustrating the value of a public health nurse to a given community. It must be understood that the public health nurse is not a sick nurse. Her service is to the pregnant woman, to the infant and the infant's mother, to the children and other members of the family, as an adjunct to medical inspection of schools and generally in the prevention of disease. The experience with the public health nurse in other countries and in Ontario, where she has been established for any length of time, shows that the death-rate among supervised pregnant women is reduced to an extraordinary extent; that the mortality among babies is less than 1/3 and that the ordinary accidents and dangers of pregnancy are reduced to a minimum as compared with countries and communities where there is no such supervision. There is no other means of anything like equal value in conveying the importance of intensive work in the prevention of disease to the public. There is no other public health work which will produce any greater direct results in a community and, compared with these results, no other public health effort is so cheap and effective. The demonstrations given by our nurses have served to convince many municipalities of its value, and caused the local authorities to appoint such nurses for themselves. As the cities and the towns adopt this system, the rural districts will in their turn learn of the experience gained in the urban communities and eventually the entire province will learn its value and adopt the same plan.

Division of Preventable Diseases.

The control of venereal diseases as well as that of tuberculosis and all other communicable affections has been incorporated under a Division of Preventable Diseases. There are now some fifteen first-class clinics for the ready treatment of venereal affections, and during last year 5,092 patients were given an aggregate of 42,000 treatments. Substantial aid is given each clinic and all cases are treated free. The remedy, Phenarsenamine (606) is supplied free of cost.

In tuberculous cases occurring in the unorganized districts the Board assumes the cost of sanitorium treatment and in all cases of communicable disease, if the parties are unable to bear the cost of treatment, this is provided. In the province generally large sums are spent annually in grants to sanitoria and for the hospital and sanitorium care of persons suffering from tuberculosis, and it is hoped soon to supplement the work of physicians by providing a travelling clinic with X-ray apparatus for diagnostic purposes. The use of diptheria antitoxin provided free (as already pointed out) has done much to prevent the spread of and to reduce the mortality from this disease, but the number of deaths is still altogether too high. The reason for this is that the physician is not called in early enough and consequently the child is soaked with the diphtheria poison before antitoxin is given. If every case of diptheria were treated with antitoxin on the first day of disease there would be no deaths and soon there would be no infection from cases of this disease to be spread about. How can this result be accomplished?

(1) By early diagnosis and treatment.

(2) By the use of the Schick test.

(3) By the use where necessary of toxin antitoxin.

The Schick test is a means whereby we can readily tell if the child is immune to diphtheria or not. If immune, no precautions such as the giving of protective doses of diphtheria antitoxin are necessary. If not immune, the child may be protected by the use of weekly injections for three weeks of a small quantity of a mixture of toxin and antitoxin. The latter method is used with excellent effect in the school children of some of the larger cities. If its use were universal, diphtheria would soon die out.

In respect to the other communicable diseases all the well-known active means of prevention are adopted, and in the presence of these diseases all the known methods of checking their spread are utilized to the fullest extent.

One disease, cancer, deserves special mention. There is no doubt that it is increasing. It does not, like measles or consumption, for example, spread from person to person. The early signs are somewhat definite and a knowledge of these early signs is of the highest importance. In the early stages any lump or sore which may result in cancer gives no pain or symptoms of ill-health. In such circumstances people lull themselves into security because of the absence of pain. A lump in the breast of a woman over 40 years, a bleeding at or after the change of life or from the bowel, a wart or sore on the lower lip or tongue of a smoker are early signs, and *should in no case be neglected.*

Division of Industrial Hygiene.

The work of the Division has been based on the possibility of obtaining active co-operation among employers and employees rather than on the enforcement of the law.

A reference library has kept pace with the publication of new material which is very extensive in this field. Articles have been published in newspapers and medical and trade journals, drawing attention to the activities of the Division and problems involved in the maintenance of the health of workers.

A preliminary survey of medical histories of school children in Toronto has been made, in the attempt to determine the physical condition of children leaving school for industry. It is intended that this should be followed up by

enquiry as to their early industrial experience, to estimate concretely what value might be obtained from a requirement that compulsory physical examination should accompany the granting of employment certificates.

A six months' demonstration was conducted in a small town in Ontario to determine how far it is practicable to make it possible for industries, employing small numbers of employees, to provide preventive medical service in their plants either by grouping together themselves or together with the municipality in the matter of expense and allotment of time of the health staff. Results were satisfactory but little progress in applying such experience can be made as long as industrial conditions remain as they are at present.

With reference to Occupational Disease, specific investigations are under way in an attempt to determine the incidence of lead poisoning among workers exposed in certain industries in Ontario. Voluntary physical examination of 110 house-painters has been made.

Some research is being conducted to determine the percentage of concentration in the air of volatile bodies used in paint which, when inhaled, produce symptoms.

It has been determined that miners' Phthisis is produced among hard rock miners in Northern Ontario. As a result of this information mine managers are placing no further orders for dry drills so that shortly the wet drill will be in use generally.

A number of individual instances of occupational disease have been investigated to determine the cause and adequate means for prevention.

Every attempt is being made to draw to the attention of employers that the Division exists to prevent disease among industrial workers, whether such disease arises directly out of the workers' employment or not. The influence on industry is the same in either case and is expensive to all concerned.

Division of Public Health Education.

In connection with the promotion of public health work there is nothing of greater value than education. When people understand the value of and the necessity for sanitation and hygiene the introduction of these salutary measures is comparatively easy. The means of health education are many and varied. Some are comparatively cheap, others are relatively expensive. The item of cost is always an important one for consideration of a health department. One of the cheapest and at the same time a very effective means of education is by means of Health Letters (weekly or daily), in the newspapers; circulars, leaflets, almanacs, booklets, and public health exhibitions are valuable but more expensive. Lectures are of value in most communities and, if supplemented by the use of slides and moving pictures, attract larger audiences and combine amusement with instruction. In the different phases of health instruction it is necessary to utilize the services of experts in the various lines. Thus a sanitary engineer supplies information in sewerage and waterworks, housing, plumbing and ventilation. An epidemiologist is a necessity in dealing with general communicable diseases. Specialists have their place in dealing with tuberculosis, venereal diseases and well-baby clinics. Of all means of public health education, however, no single effort is so effective as the use of the well trained public health nurse. She goes into a community and shows by her example just what a public health nurse can do and it is not long before the competent young woman

gains the confidence of the public and is able to show that she or some nurse of corresponding ability is of great value to the community. Every health department recognizes the value of public health education and its limits are defined only by the extent of the financial appropriation.

Voluntary Agencies in Public Health work.

The assistance of voluntary agencies in promoting public health work is, if properly utilized, of great value. The Board has received valuable aid from such associations as the Red Cross Society, The Canadian Association for the Prevention of Tuberculosis, The National Council for Combating Venereal Disease, the Women's Institute, the Social Hygiene Council and others.

In order that authentic and non-conflicting information may reach the public and that the best results may accrue from such voluntary assistance, it seems desirable that there should be co-ordination of this work under some central authority. For this reason the Board, while greatly appreciating the work of the voluntary societies in the promotion of public health, is strongly of the opinion that without some such co-ordination much effort will be wasted. Above all the co-operation and good will of the great mass of our people must be enlisted in the great field of disease prevention. In this work the daily *Watchword* is *Education.*

DIVISION OF LABORATORIES

Diagnostic work, distribution of outfits, vaccines, serims and othet materials as carried on at the Main Labratories at Toronto, and the Branch Labratories at Kingston, London, Fort William, Sault Ste. Marie, North Bay, Peterboro and Owen Sound.

Dr. J. W. S. McCullough, D.P.H.,
Chief Officer of Health,
Spadina House, Spadina Crescent.
Toronto, Ontario.
(See Regulations attached.)

Report of the Division of Laboratories for the Year 1921.

To the Chairman and Members of the Provincial Board of Health.

I have the honour to submit herewith, tabulated statements of the work performed in the Laboratories during the year 1921. This has been a year of construction and expansion. The main Laboratories were transferred from 5 Queen's Park to larger and better quarters in Spadina House. The move was accomplished without any interruption of routine work. The present space and equipment are both sufficient for carrying on the work in an efficient manner, and provide for growth which may be expected.

Two new branches were established at Owen Sound and Peterborough. These branches are well located, and equipped to render a full laboratory service to the districts in which they were placed.

Another noteworthy feature of the year's work is the establishment of special service on holidays, nights and Sundays in order to prevent delays in the distribution of laboratory products and in the diagnostic work in diphtheria. These extra duties have been divided up among several members of the staff, so that there is some one on call at the main laboratories until 10 p.m. every day in the year. Many instances have already occurred showing the benefits of this in early diagnosis and treatment.

Manufacture of arsenicals for the treatment of syphilis has been established on a satisfactory scale. Our various clinics are assured of a supply of a dependable drug at very low cost.

Extension along various lines of investigation is planned for improvement in the routine.

During the year this Division has co-operated with other Divisions especially Venereal Diseases, Public Health Education, and Industrial Hygiene in furthering the accomplishment of general aims along the lines of prevention, early diagnosis and treatment of all communicable diseases.

H. M. Lancaster,
Director of Laboratories.

SUMMARY OF

	Main Laboratories Toronto								
	1911			1920			1921		
Diphtheria (Swabs)			1,068						16,705
Release from Quarantine		173						7,228	
Positive	91						1,604		
Negative	82						6,624		
Diagnosis		895						9,477	
Positive	226						1,601		
Negative	669						7,876		
Tuberculosis (Sputum)			1,650						2,421
Positive	402						324		
Negative	1,248						2,097		
Typhoid (Blood)			749						1,195
Positive	70						267		
Negative	679						928		
Syphilis:—									
Colloidal Gold Reaction									252
Wasserman Reaction									16,781
Very Strongly Positive							2,011		
Strongly Positive							422		
Positive							1,299		
Negative							13,049		
Spirochaeta Pallida									16
Positive							4		
Negative							12		
Gonorrhea									-2,097
Positive							493		
Negative							1,604		
Rabies (Brains of Animals)			70						14
Negri bodies present							1		
Negri bodies absent							13		
Milk			168						182
Water			1,718						2,610
Bacteriological	1,668						2,561		
Chemical	50						49		
Liquor(for License Department)			241						818
Miscellaneous Specimens, including Coal for Public Institutions			86						437
Totals			5,750						43,528

DIAGNOSTIC WORK

Branch Laboratory Kingston			Branch Laboratory London			Branch Laboratory Fort William			Branch Laboratory Sault Ste. Marie			Branch Laboratory North Bay		
1921			1921			1921			1921			1921		
		1,995			3,777			688		1,552				841
	664			1,404			237			536			472	
130			395			97			214			167		
534			1,009			140			322			305		
	1,331			2,373			451			1,016			369	
165			468			101			295			110		
1,166			1,905			350			721			259		
		976			1,061			347			123			174
108			193			54			30			50		
868			868			293			93			124		
		580			511			77			18			92
162			158			27			3			61		
418			353			50			15			31		
					233			16			4			1
		1,223			3,142			886			337			271
144			630			151			67			53		
32			114			13			62			11		
9			140			20			19			20		
1,038			2,258			702			179			187		
								13			8			1
						7			4					
						6			4			1		
		198			359			266			167			172
57			101			75			98			47		
131			258			191			69			125		
					2,184			334			428			57
		758			1,030			390			1,776			482
62			659						1,383			482		
696			371			390			393					
		5			8									
		274			655			611			707			16
		6,009			12,960			3,628			5,120			2,107

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods			Syphilis					
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Algoma—															
Bruce Mines			1												
Collins Inlet									1						
Foleyet	3	2	1	2					1	2	2	2	29	1	
Hornepayne											1				
Killarney															
Levack															
Nesterville						2				1					
Plummer															
Sault Ste. Marie				1						1	1		4		
Brant—															
Brantford	3	7	3	9	7	65	5	19		44	33	17	152		1
Burford		1		1		1		1							
Cainsville	1			1		1				4		3	12		
Ohsweken		2	1	5		1				12	1	7	16		
Paris		1		2		3	2	3			1		9		
St. George		4	7	6		2				1			5		
Scotland						2		1							
Bruce—															
Allenford				1		1									
Barrow Bay															
Cargill						2									
Chesley		1		3		5	1								
Elmwood				3											
Hepworth			1	10		3		2					1		
Kincardine				1		2									
Lion's Head										1			1		
Lucknow	3	3	5	2	1	3		1					7		
Mildmay	2	14	1	2	1	4		2		1			3		
North Bruce															
Paisley			1	2	1	6	1	4					1		
Port Elgin		1		3	3	12							1		
Ripley	3	5	3	1											
Southampton						1									
Tara		1		1											
Teeswater						3									
Tiverton				2			1	1							
Walkerton				1		5		2							
Wiarton			7	10	9	19		3		1					
Carleton—															
Ashton					1	3									
Carp		1	1			2							1		
Kinburn															
Manotick			2		2	8	1	2							
North Gower				1		1		3							
Ottawa			2		2	5	2	11		283	37	104	1480		2
Richmond								1							
Westboro										1		1	6		
Dufferin—															
Grand Valley				2	1		2	1							
Horning's Mills															
Orangeville	2	13	5	12	1	9	1	3					3		
Shelburne	2	4	3	13				2							

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.

Gonorrhea	Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
		Negri Bodies			Food Content		Preservatives	Bacteriological										
	Animal	+	—	Animal Inoculations	Fats	Total Solids	+ —	Tubercle Bac. +	Tubercle Bac. —	Pus Cells +	Pus Cells —	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
														1			2	4
																		1
	1															19		21
																	1	1
																1		1
																		3
																1		1
																	2	9
11	19															74	17	3	489
																2			6
																			22
2	1																	1	49
																			21
																1			26
																			3
	1																		3
																1			1
																		1	3
																15			25
																			3
																		1	18
															2	4			9
																			2
																			25
1	3															17		6	57
																1			1
																			16
																			20
																			12
																			1
																9			11
																			3
																			4
	1															1	22		32
		dog	1													2		1	53
																2			6
																			5
																1			1
																			15
																			5
17	27															1	58	4	2035
																			1
																			8
																			6
															1				1
																2		1	52
																			24

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida		
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−	
Dundas—																
Iroquois						1							1			
Morrisburg		2			1	14		2		1			3			
Newington	1	1		4	2	2	1	6		1			2			
Winchester													1			
Durham—																
Bethany			2	1		1		4								
Blackstock			1	3		4										
Bowmanville	6	34	14	58		17	3	9		2			3			
Canton																
Ida																
Enniskillen	13	25	5	25		2	1	2								
Millbrook	38	71	19	101		4	5	8					1			
Newcastle	1	1														
Orono				1	1	8		3								
Pontypool						1		2								
Port Hope	1	3	1	13	5	22	5	13		3		2	8			
Elgin—																
Fingal						1										
St. Thomas																
Straffordville			5			1										
Essex—																
Amherstburg			3			4										
Comber						1										
Essex	2	3	2	1	1	3		2								
Ford								1					3			
Harrow																
Kingsville		2	1	4		5	2	3								
Leamington	104	415	23	31	1	4	2			4	1	2	14			
Sandwich										2						
Tecumseh						1		1					1			
Walkerville												2	7			
Windsor						4		1		69	11	25	292			
Woodslee								1								
Frontenac—																
Canonto																
Kingston																
Glengarry—																
Alexandria	5	4	1	1		1		2								
Apple Hill						5										
Dalhousie Mills					1	7		2					1			
Dalkeith				2	1	3										
Dunvegan						1	2	2								
Lancaster						1										
Maxville		2		4	1	10	2	12		1						
Williamstown		3	2	1	2	2										
Grenville—																
Kemptville								3					2			
Merrickville				2		1										
Prescott						1		2		1		1	6			
Spencerville						1										
Grey—																
Ayton								2								

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhœa		Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological										
									Tubercle Bac.		Pus Cells								
+	—		+	—	Animal inoculations	Fats	Total Solids	+	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
1	1														1				4
																	4		28
																	3		23
																			1
																			11
																	3		8
1	4														1		4	2	1 160
																	2		2
																	1		1
																	1		74
2	5																9		262
																			2
4	11																2		21
																	3		6
4	4														1		68	8	1 169
																			1
																	1		1
																			6
																			7
																			1
2																		12	28
																			4
																	1		1
																	7		24
1	5																	1	608
																			2
	1																		4
																			9
	3																25	22	452
																			1
																		1	1
																		12	12
																	4		18
																			5
																			11
																			6
																			5
																			1
3																	6		41
																			10
																	1		6
																	1		4
	1																2		14
																			1
																		1	1

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Spirochæta Pallida	
										Very Strongly Positive	Strongly Positive	+	−		+	−
	+	−	+	−	+	−	+	−								
Grey—																
Ayton																
Chatsworth			2	4		9		2					2			
Clarksburg		2		3		1										
Dromore				1									1			
Dundalk			2	4		11		2				1	4			
Durham	1	1	3	6	1	8	2	2								
East Linton							1									
Flesherton				2	1	6							2			
Hanover						8	10	16								
Heathcote						1	2									
Holstein				2		4		1								
McKeller				3		3										
Markdale	3	1	1	2	1	2		1								
Meaford		1		2	1	7	4	16					1			
Neustadt		6	5	6												
Owen Sound	118	178	216	1916	6	42	7	22		16	5	11	77			1
Priceville					4	5										
Shallow Lake				1												
Woodford																
Haldimand—																
Caledonia								2								
Canfield				3		2										
Cayuga						1							2			
Dunnville	9	14	8	17		16	3	23		3			8			
Fisherville	2	1		2	1											
Hagersville			6	202		2		1				2	4			
Jarvis		4	1	5		2										
Selkirk				1		2							3			
Haliburton—																
Haliburton			1	8	1	17	3	1		3		2	40			
Minden						2	4	3								
Halton—																
Acton	7	5	7	7	1			1					2			
Bronte					1											
Burlington	3	6	3	11	1	6		7		2		1	1			
Freeman																
Georgetown	22	31	4	21	1	2		6				1				
Milton				2	1	9		1				2	3			
Norval																
Oakville	15	7	5	5		1	1	8					6			
Hastings—																
Belleville	1	21	13	92	6	27	5	35		6	1		15			
Deseronto				1	1	8		1					1			
Eldorado					3	4		2		1		1	3			
Frankford		5		2	2	3	1	7								
Glen Miller																
Latta				1												
Madoc					4	8		1								
Marmora	4	8	3	7	3	8		1				1				
Roslin		4		3		5	1	4					2			
Shannonville							3									
Springbrook			2													
Stirling					1	1										
Sulphide																
Trenton			1		1	11		5		2		2	10			1
Tweed					1	3										

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhœa		Rabies Diagnosis				Milk									Waters		Liquors for Disease Department	Miscellaneous Specimen	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological									
										Tubercle Bac.		Pus Cells							
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																		1	
																		1	1
1	2																	2	25
																		1	6
	1																		3
1	1																		26
	3															1		10	38
																		2	3
																			11
1	2																	13	50
																			3
																		4	11
																			6
																		1	12
																		5	37
																			19
21																		16	2716
	40																21	2	12
																			1
																		2	2
																			2
	2																		7
																			3
1	2																	9	120
																	5		7
	3																1		220
																			12
																			6
2	8																	2	88
																		2	11
																	2	5	37
																1		6	8
																		39	80
																2			2
																		2	90
	1																	3	24
																		3	3
3	2																	23	79
																	2		
																		27	249
3	2																		17
																			14
																		35	55
																		2	2
																			1
																		4	17
2	4																	14	57
																			2
																		1	20
																			3
																		21	23
																		1	3
																		1	1
2	2																	4	13
																			5

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis						
	Release		Diagnosis						Wassermann Reaction					Spirochæta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	1F−
Huron—															
Auburn						1		1							
Belgrave															
Blyth					1	2									
Brussels					1	3		5							
Crediton	1	4	1	1											
Dunnganon					1										
Ethel	1	1	1	3		1		1							
Exeter	1	4	1	8	3	2									
Goderich	6	2	2	12	3	16	1	3				1	10		
Gorrie															
Kentail													2		
Seaforth	1	6	2	3											
Walton													1		
Wingham			2	4		3	3	1		1			2		
Wroxeter							1								
Kent—															
Chatham	6	4	3	3	7	35	1	3		2	1		17		
Dresden						2		11							
Merlin															
Tilbury						2							1		
Wallaceburg			3			1		1		1			1		
Lambton—															
Brigden						2							1		
Forest	3	5	3												
Inwood			1	1											
Petrolia	3	3	1	6	1	4	1						4		
Port Lambton							1						2		
Sarnia			**3**	7	2	16	2	4		5		1	26		
Thedford	2		1	3		2	2	4							
Watford			1												
Wyoming						1									
Lanark—															
Almonte		3	2	5		2							1		
Carleton Place			1	1		2		1							
Dalhousie Lake															
Lanark				1			2	1					1		
Pakenham	4	2	2	4		9	1	1					3		
Perth				2		2		1					4		
Smith's Falls	5	33	26	43						1			10		
Leeds—															
Brockville	2	3	3	9	6	16	2	7		4		1	25		
Elgin				1		1									
Frankville													1		
Gananoque	5	7	4	5				2							
Lansdowne						1		1							
Lyn						3									
Newboro															
Lennox and Addington—															
Tamworth	1	1	2	2				1							
Lincoln—															
Beamsville	3	2	10	4	2	5	3	5					4		
Grimsby		1	10	4									1		
Jordan	1		2	1	3	4	1	3							
Lundy's Lane						1									
Merriton		1	2		4	1						1	1		

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con*

Gonorrhœa		Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological										
									Tubercle Bac.		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																			2
																		1	1
																			3
																	1		10
																			7
																			1
																			8
12	3																		24
12	2																9	2	71
																	2	1	3
																			2
																	1		13
	2																		1
1																	2		21
																			1
																	1	1	87
																	1	1	15
																	11		11
1	1																		5
1																			8
																			3
	1																7		19
																			2
																			23
																			3
12	3																	8	1	80
1																			15
																			1
																			1
																			13
1	2																37	3	48
																	2		2
																	1		6
																	1		27
																			9
																		1	119
																		4	29	111
																			2
																			1
																			23
																			2
																			3
																		1	1
																		1	8
2	1																3		44
																	1		17
																	9		24
																			1
																			10

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis						
	Release		Diagnosis						Wassermann Reaction					Spirochæta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Niagara-on-the-Lake		1		1		1									
Port Dalhousie								1							
St. Catharines	98	209	21	132	10	71	7	14		59	8	27	298		
St. Davids															
Smithville	2	6	2					1							
Virgil															
Manitoulin—															
Gore Bay					1										
Little Current		4	2			3									
Middlesex—															
Ailsa Craig				1	2	1									
Grafton		1	1	1											
London						1					1		2		
Strathroy				1											
Muskoka and Parry Sound—															
Bala	2		2					2							
Bracebridge			1	3	1	9	1	2				2	8		
Burk's Falls	2	3	2	7		5		2				1	1		
Byng Inlet															
Callander										1			1		
Depot Harbour					2		4	5					4		
Gravenhurst			5	4		3	2	3		2		1	24		
Huntsville				5		4		1					4		
Jarlsburg															
Kearney				1		1									
Maganatawan		1	1	1											
Muskoka				1									1		
Pakesley	1	4	4	3	1	3						1	2		
Parry Sound	6	2	3	6	2	19	2	17		6		1	28		
Port Carling						2									
Port Sandfield						1									
Powassan	1	6	5	4		7		2					2		
Sanitorium													1		
Severn Bridge			3	8		2		1							
South River	1		3	4		3		4					1		
Sprucedale	3	7	2	5		6							3		
Sundridge	1	2	2	6			4	7							
Trout Creek				4		1							1		
Utterson															
Windermere															
Nipissing—															
Algonquin Park				1									1		
Mattawa															
North Bay	7	16	11	20		2				3	3	3	29		
Sturgeon Falls	7	30	2	8		2				2	1	1	2		
Norfolk—															
Delhi		3	6	9		23	1	6		1		1	7		
Port Dover			2	6	1	5		3							
Port Rowan					2	3		2			1		2		
St. Williams													1		
Simcoe	2	3	3	10	5	14	5	8		11	1	7	56		
Waterford		2	1	7	2	5		4					3		

ONTARIO AT TORONTO FOR THE YEAR 1920.—SPECIMENS EXAMINED.—*Con.*

Gonorrhœa		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac.		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																		13			16
																		4			5
	6															1		18	10		989
																					2
2																					13
																		1			1
																					1
1																			1		11
																					4
																					3
																				12	16
																					1
																		1			7
3	4																				34
	1																	1			25
																		4			4
																					2
																		7			22
																1		19			64
	1																	2			17
		dog	1														1	2			4
																		2			4
																		1			4
																		2			4
																		5			24
3	8																2	7	2	2	116
																					2
																					1
1																					28
																					1
																					14
																			2		18
																					26
																					22
	2																				10
																		21			21
																		8			8
																			2		12
2	6																	1	17		120
1	2																		2		60
1																		9			67
1																		1			19
																					10
																					1
																3		32	12	1	173
																		5			29

REPORT FROM BRANCH LABORATORIES OF THE PROVINCIAL BOARD OF

unicipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Spirochæta Pallida	
	+	−	+	−	+	−	+	−		Very Strongly Positive	Strongly Positive	+	−		+	−
Northumberland																
Brighton				2		8		5		3	1	4	9			
Camborne								1								
Campbellford				1	2	6		1				1	4			
Castleton						1		1								
Cobourg	10	6	5	18	2	16	5	11		7	1	5	40			
Colborne						1	1	1								
Cold Springs					1											
Grafton		1		1				1								
Hastings				2		4		1		1						
Roseneath				5		1	1	3								
Warkworth			1	2	1	2							2			
Ontario—																
Beaverton	6	5	4	4		2										
Brechin					2	3										
Brooklin						3										
Brougham						1										
Cannington				1		1										
Claremont			1	7		4		3								
Goodwood								1								
Oshawa	113	489	147	876	12	55	3	14		14		4	39			
Pickering						1										
Port Bolster																
Port Perry				4	1	5										
Port Whitby																
Sunderland	3		1	2		4	1	2					1			
Uxbridge			3	4		10		2					2			
Whitby	1			4		6	1	3		3	1		17			
Zephyr				1												
Oxford—																
Burgessville				1												
Drumbo			1	1		3										
Embro																
Ingersoll	2	1					2	10								
Mount Elgin	1	1														
Norwich				1		1		4					2			
Otterville	1	7	1	4		5										
Plattsville			1	2	1	7		2					1			
Springford																
Tavistock						5					1		1			
Tillsonburg			6	3		12	1	10		3		3	15			
Woodstock		3	2	15	1	11	1	11		2			17			
Peel—																
Alton		1	3	22	1	2		3					3			
Bolton				6	1	5	2	1								
Brampton	2	3	8	8	1	4							1			
Burnhamthorpe						1										
Caledon						3	1	1								
Cheltenham																
Clarkson				1		3		1		2						
Cooksville		1	2	3		2										
Dixie				2												
Erindale																
Forks of Credit																
Inglewood	7	9	1	1												
Lorne Park																
Meadowvale																

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhœa		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
					Animal Inoculations					Tubercle Bac.		Pus Cells		Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial		
+	—	Animal	+	—		Fats	Total Solids	+	—	+	—	+	—							
4	3																	1		40
																				1
																		10		25
3	7																	16		18
																		5	7	5 153
																				1 4
																		2		3
																				3
																				8
																				10
																				10
																				21
																		12		17
																			6	9
																		1		2
																		4		6
1	1																			17
																				1
23	70															15	1	55	6	2 198
																				1
																		1		1
																		2		12
																		1		1
																				14
1	1																	2		25
	5																	7		50
																				1
																				1
																		3		8
																		1		1
																				15
																				2
																		2		10
																		21		39
																		1		2 17
																		1		1
																				7
																				3 56
																			2	65
	2																	1		40
	1																			16
																3	2	13	4	1 50
	1																			1
																		8		14
																4		5		9
																				7
																				8
																		2		4
																		2		2
																		3		3
																				18
																		10		10
																		4		4

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis						
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction				Spirochæta Pallida	
	+	−	+	−	+	−	+	−		Very Strongly Positive	Strongly Positive	+	−	−	+
Palgrave				3	1	3									
Port Credit		3	1	4		9		2							
Streetsville				3											
Perth—															
Atwood				1											
Listowel	9	7	4	7		8	1	5							
Mitchell				3	1	6	1			2			7		
Monkton				1									2		
St. Mary's					2	2									
Science Hill															
Sebringville				1											
Stratford	1		1	2	2	29	2	3			1	3	3		
Peterborough—															
Bailieborough				1		1	2	9							
Havelock		1	5	2		1		1							
Keene		5	2	5		1	1	3			1		3		
Lakefield			1		1	1	1								
Peterboro	233	576	179	565	9	44	9	6		10		8	84		
Warsaw													1		
Prescott—															
Alfred															
Fournier													1		
Hawkesbury			1		1	14	2	6		1			4	2	2
L'Original															
Plantagenet						1									
St. Isadore							1	3							
Vankleek Hill				1		1				1			4		
Prince Edward—															
Bloomfield				1	1										
Consecon	2	7	6	2		2		1							
Demorestville															
Picton				2	2	4	2	9		1			3		
Wellington				1		1		1			1				
Rainy River—															
Fort Frances															
Stratton		1													
Renfrew—															
Arnprior			3	2	2	4							4		
Beachburg						1									
Cobden	1	9	2	14	1	7		2							
Eganville			2	2	2	14									
Forester's Falls				2		5									
Pembroke	1	1	7	10		2				8	1	2	18		
Renfrew				1		1									
Russell—															
Bourget			2	2	1	2		1		1			2		
Clarence Creek	21	20	1	3		1									
Eastview										2		2	6		
Embrun				1		2									
Metcalfe	3	2	1		2	4									
Osgoode						1									
Russell					2	10									
Vars	3	4	3	4											
Simcoe—															
Allandale															
Alliston				2	2	3		1					5		
Angus		1	2	4											

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhœa		Rabies Diagnosis				Food Content		Milk								Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies					Preservatives		Bacteriological										
										Tubercle Bac.		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																				7
																	1	10		33
																		3		6
																	1	2		4
																				41
1	3																	2	1	27
																				3
																				4
																		1		1
		2dog	2															2	1	4
																		15	2	66
																		5		18
1																		48		59
																			1	22
																		1		5
2	7															1	1	3	4	1741
																				1
																		5		5
1	1																			3
1	2																		1	37
																		5		5
																		3		4
																				4
																				7
																				2
																				20
																		8		8
1																		16	1	41
																				1
																			2	2
																				1
1																			1	17
																				1
1																		2		39
																		1		21
																				7
																		68	2	120
																		2	4	8
1	3																	2		17
																	4			50
																				10
																				3
																				12
	12																			3
																				12
																				14
																		3		3
																		12		15
																				7

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Spirochaeta Pallida	
	+	--	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−		+	−
Simcoe—*Con.*																
Atherley																
Barrie	3	9	5	44	4	17	5	14		6		3	16			
Beeton				1												
Belle Ewart																
Bond Head	1	4	3	4												
Bradford	2	3	1	7	1	2		1								
Camp Borden													3			
Churchill			1	3									1			
Coldwater	1	1		2	2	8	2	3					1			
Collingwood	3	14	6	35	4	7	3	7		13	4	5	78			
Cookstown			1	1	1	4		1		1						
Creemore		11	4	15		7		1					2			
Edgar				2												
Elmvale			2	4		1	1	2					2			
Everett		4	3			1		1			1	1				
Hawkstone																
Hillsdale				1												
Midland	2	2	2	11	2	8		1		9	1	3	42			
Orillia	55	161	41	85	4	16	10	19		4		2	30			
Penetanguishene	2	2		5	1	13		2					3			
Port McNicoll				3			1	2					2			
Stayner		3	1	4		2	1	8					3			
Stroud		3	1	4		1	1	2								
Thornton	3	5	2	11				1								
Tottenham		1	2	4	2	1							1			
Victoria Harbor	3	2	4	5		8		8		2			8			
Washago																
Waubaushene			1													
Stormont—																
Aultsville						3										
Avonmore					1											
Cornwall	3	3	7	10	5	28		1		11		2	7			
Crysler						1										
Finch						1		1					1			
Mille Roches			1	1	1	1										
Moose Creek					4	6		2								
Sudbury—																
Burwash	1	3	1	1	1	24				58	6	31	913			
Capreol			3	5		3				1			1			
Chapleau		1	1	1		2	1			1			5			
Coniston					1	1							1			
Copper Cliff			2	6		7		1		1			3			
Creighton Mine		3	2	3		3	1			2	1	2	7			
Eloas																
Espanola			2		2	12				1			1			
Massey	2	1	8	12												
Sudbury				2	2	25		5		19	1	5	91			
Webbwood			3	4						2			2			
Thunder Bay—																
Grant													1			
Fort William																
Port Arthur						1		1								

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhoea		Rabies Diagnosis				Milk										Waters				
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac.		Pus Cells								
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Sample	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	Total for Year
																		1			1
6	9																	18	1	1	161
																					1
																		1			1
																					12
	2																				19
																					3
																		6			10
																		1		1	22
5	10															41	8	11	4		258
																		1			10
																					40
																					2
																					12
	1																	6			18
																		1			1
																					1
6	8															1					98
	2	cow	1															156	5	46	637
1	1																		2	23	55
																					8
																		1			23
																		2			14
																		1			23
																			2		13
	3															1		7			51
																1					1
																					1
																					3
																		1			2
	5																		1		83
																					1
																					3
																					4
																		1			13
7	27																	4			1077
	1																	26			40
2	5																				19
																1		17			21
	1																	18	3		42
	1																				25
																		2			2
	1															1		19			39
																		6			29
2																		27	8		187
																					11
																					1
																			2		2
																			14		16

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Spirochaeta Pallida	
										Very Strongly Positive	Strongly Positive	+	−		+	−
	+	−	+	−	+	−	+	−								
Timiskaming—																
Cobalt	2		2	3		6		1		1	2		10			
Cochrane			1			3	3	2		1		1	24			
Englehart			2	3	1	3		1		1	1	2	8			
Gowganda						1							1			
Haileybury			1		2	7	3	6					10			
Hearst		6		1			1	5		1		1				
Iroquois Falls						4		1		1		1	12			
Kapuskasing				1				2		2		1				
Kirkland Lake													2			
Larder Lake																
Matheson																
Monteith																
Nellie Lake																
New Liskeard	2	5	5	5	1	6		2		3		2	7			
North Cobalt						3										
Schumacher						1				1			2			
Smooth Rock Falls								1								
South Porcupine				2	1	4		1		3		1	6	1	1	
Timmins			1	3	2	11	2	8		10			23			
Whitney				1				2								
Victoria—																
Bobcaygeon	3	2	7	16	1	7		2		1	1	1	3			
Fenelon Falls				2			1	3								
Kinmount			7	19												
Kirkfield																
Lindsay		7	2	7	8	26	2	11					3			
Little Britain						5										
Manilla								1								
Omemee		1		5		4		1			1		7			
Woodville						3										
Waterloo—																
Ayr		4	2	2		9	2	8					1			
Elmira				1		8				3						
Galt	5	6	7	19	2	23		3		16	1	5	62			
Hespeler	1	2	1	5	2	5				3			13			
Kitchener	67	278	48	132	13	102	5	8		8	3	4	59			
Linwood					2	3				1			1			
New Dundee						1		1					1			
New Hamburg	1	3	7	2	1	2		4								
Preston	3	5	4	10	1	1		1		1		1	1			
Waterloo	3	10	5	7		9				1			2			
West Montrose																
Welland—																
Bridgeburg	19	26	19	20	1	4	3	2								
Chippawa		1	3		1	7	2	2								
Crystal Beach						1										
Fenwick		1	1		2	2		1								
Fonthill						2		2								
Fort Erie				1		3										
Niagara Falls	7	2	4	16	2	32	15	36		44	7	15	142			
Port Colborne	1	4	8	4	1	5	1	1		2	1	1	5			
Port Robinson																
Ridgeway	2	1		7		2	1	2		6	1	2	7			
Stamford																

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED. *Con.*

Gonorrhœa		Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological										
+	-	Animal	+	-	Animal Inoculations	Fats	Total Solids	+	-	Tubercle Bac. +	Tubercle Bac. -	Pus Cells +	Pus Cells -	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																		12		1	40
2	1																	2	2	1	43
	1																	3			26
																		1			3
	7																	7			43
																					15
																					19
																		3			9
																			1		3
2	1																				3
																		1			1
																		1			1
	1																	3			4
	1																	1			40
																					3
	1																	1			6
																					1
3	3															4		28			58
9	13																				82
																					3
	1																	3			48
																		1			7
																		19			45
																		26			26
1																					67
																					5
																					1
																					19
																					3
1	1																	3			33
1	4																	2			19
5	7																	51	1	1	214
1																		6			39
9	22															1	10	33			802
																		1			8
																					3
																		6			26
	2																	3			33
1	2																		2		42
																		3			3
																					94
																		4			20
																		27	2		30
																					7
																		1			3
																					4
14	23	dog	1															146	10	3	519
1	1																	8			44
																		1			1
2	1																	9	6		49
																		2			12
																					5

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Spirochaeta Pallida	
	+	−	+	−	+	−	+	−		Very Strongly Positive	Strongly Positive	+	−		+	−
Welland—*Con.*																
Stevensville		1	2	1		1										
Thorold	2		1	4		8				3			11			
Welland	7	12	8	13	3	19	3	9		22	2	13	145			2
Wellington—																
Alma				1	2	2		1								
Arthur				5	1	1	2	3					1			
Belwood				1				1				1	1			
Drayton		2	5	8			3	7					5			
Elora			1		2	5		1								
Erin				3	1	3	1									
Fergus				1		2	2						7			
Glen Allen						5										
Guelph	32	57	45	84	3	27	2	20		69	12	53	947			
Harriston	6	1	2	8	2	8		2					2			
Hillsburg			1			1	1									
Moorefield				4		4										
Morriston				2				2								
Mount Forest				3		8		1								
Palmerston				2		1		1					1			
Rockwood				3		3							2			
Wentworth—																
Ancaster																
Bartonville				27												
Binbrook		2		13												
Carlisle																
Dundas	1					1				1			8			
Hamilton		1				1				17	2	5	93			
Lynden				3	1	3		3					2			
Stoney Creek																
York—																
Agincourt	4	13	3	12	1	9		3		1	1		2			
Aurora	9	22	22	43		1	1	3		1		1				
Birch Cliff	1	4	2	5				2				3	10			
Fairbank	9	36	6	13		6										
Gormley																
Highland Creek				1												
Humber Bay																
Islington																
Jackson's Point																
Jefferson																
Keswick		1	1	3												
King		1	3	3		1							1			
Lambton Mills								1								
Langstaff										4		3	53			
Lansing																
Leaside				1												
Long Branch	3	3	1	9												
Maple																
Markham				2		2						1	4			
Milliken	2			3		1										
Mimico	1	9	36	1037	3	8	1	3		3		1	11			
Mimico Beach	7	30	10	33							1		5			
Mount Albert	3	7	1	8		3										
Mount Dennis	1	9	5	9		2		3		1			3		1	
Newmarket	2	3	1	2		4	1						1			
Newtonbrook																

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con*,

Gonorrhœa		Rabies Diagnosis				Milk									Extraneous Matter	Number of Milk Samples	Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological											
										Tubercle Bac.		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	—	+	—	+	—	Count			Chemical	Bacteria			
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	33
1	18	cow	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	8	52	1	343
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	10
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	15
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	31
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	10
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	2	22
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1	16
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
17	61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	168	4	76	1677
1	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	34
2	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	10
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	9
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	13
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	6
1	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7	11	.....	30
....	...	dog	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	72	1	199
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	15
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....	.....	16
...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	62
2	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	118
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	72
....	...	dog	1+	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	11
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	2	19
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	61
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	22
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	1	32
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52	.....	6	1	32	1204
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	88
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	37
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	15
....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
York—*Con.*															
New Toronto	74	135	52	226		5		1		2		2	5		
Pefferlaw															
Queensville	7	17	4	5			1	3					2		
Richmond Hill	7	11	9	10		11	2	8		8		1	5		
Roches Point		1													
Scarboro'															
Schomberg	1	2				10							1		
Stouffville				2	1	3				1			5		
Sutton West		2	2	5			1	2		1					
Swansea		2		9		1				4			4		
Thornhill	4			18	1	9	1	1		76	14	57	1271		
Toronto	240	3149	123	832	12	107	4	28	252	927	240	794	5631		
Unionville															
West Hill															
Weston	10	16	16	64		5		7				1	8		
West Toronto	1	8	1												
Willowdale						3									
Woodbridge				2		1		1					1		
Totals	1604	6624	1601	7876	324	2097	267	928	252	2011	422	1299	13049	4	12

Grand Total 44,528

ONTARIO AT TORONTO FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Food Content		Milk								Waters				
			Negri Bodies					Preservatives		Bacteriological										
										Tubercle Bac.		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	Total for Year
1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	.....	2	.....	.....	538
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	40
2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	10	2	1	96
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	3	.....	8
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	1	17
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	21
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1454
228	10	23 1ct 6dg	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8	199	315	99	14227
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	20	.....	.....	151
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	6
493	16	04	.....	113	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	182	49	2561	818	437	4452

SUMMARY OF OUTFITS, VACCINE, PHENARSENAMINE AND TREATMENTS SUPPLIED DURING THE YEAR 1921.

Outfits		85,314
Syphilis (Wasserman)	23,540	
Gonorrhea	5,228	
Water	3,526	
Diphtheria	42,746	
Tuberculosis	4,209	
Typhoid	6,065	
Vaccine		51,903
Typhoid-paratyphoid	18,436	
Pertussis (whooping-cough)	33,473	
Silver Nitrate (for prevention of Ophthalmia)		20,185
Pasteur Preventive (for Rabies)		
Cases		96
Injections		4
Phenarsenamine:—		
Ampules		13,970
Grams		7114.2

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. of Injections
Algoma—													
Blind River				1				1					
Collin's Inlet							12	12	20	30			
Desbarats										40	15		
Foleyet	78		24		36	5	12	155			65		
Hornepayne				20				20					
Levack				6				6					
Plummer				1				1					
Sault Ste. Marie	12							12					
Brant—													
Brantford	453		98	96	1200	300	108	2255	530	700	860		
Desbarats										40	15		
Ohsweken	26		6		12			44	50				
Paris						20		20	120	120			
St. George	12		12	12	30	5		77					
Bruce—													
Allenford											25		
Barrow Bay				1				1					
Chesley				12				12		10			
Elmwood										60	25		
Hepworth				6				6			20		
Kincardine				1	18			19			20		
Lucknow	12			12		10		34					
Mildmay	12			18	30		6	66	30				
Paisley									130				
Port Elgin				12	36	25	24	97	30				
Tara				12				12	10	60	10		
Teeswater						5		5					
Tiverton	4				6			10	20		25		
Walkerton	12		12	1		4	1	30					
Wiarton			6	8		10		24	30	60	45		
Carleton—													
Ashton				6		5		11			10		
Carp				4			18	22					
Ottawa	3409		48	70	96	5	54	3682	240	2730	3800		
Dufferin—													
Corbetton						5		5					
Grand Valley									10	55			
Orangeville	12				12	15	6	45			60		
Shelburne	60			2	72		6	140					
Dundas—													
Chesterville										60			
Morrisburg					12	25	24	61	55				
Newington					12		12	24					
Winchester	2							2					
Durham—													
Bethany						5	12	17					
Binbrook					48			48					
Bowmanville	62				96		96	254	50	275	135		
Enniskillen	6				78	5		89		20			
Franklin	4		4		6	5	6	25					
Garden Hill				6				6					
Millbrook	6		6	6	192	10	12	232	30				
Orono					54	10		64	10	20			
Port Hope			24	96		30	30	180	20	20	85		

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1921

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wasserman)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. of Injections
Elgin—													
St. Thomas									20	50	30		
Straffordville					18			18					
Essex—													
Amherstburg					12	5		17					
Kingsville				18	24	10	6	58					
Leamington	63		42	8	676		6	795	10	20			
Ojibway				27				27					
Tecumseh	6		6		12		6	30					
Windsor	800		600	1	576	500	36	2513	365	840	525		
Woodslee									10				
Frontenac—													
Kingston				72				72	720	420	245		
Verona										30			
Wolfe Island										70			
Glengarry—													
Alexandria	6		6		12			24	25	50			
Apple Hill						10		10					
Dalhousie Mills	6					5		11		10	10		
Dalkeith	6		6			5		17					
Dunvegan							12	12					
Maxville				25		15	72	112	20		10		
Williamstown					18	5		23					
Grenville—													
Kemptville	4							4	10	20	15		
North Augusta									20				
Prescott	24							24	20	10	50		
Grey—													
Chatsworth						5		5					
Clarksburg					6			6					
Dromore			4					4					
Dundalk			6				12	18			25		
Durham				24	6	5		35	40	20			
Flesherton							60	60			10		
Hanover				6	32	10	48	96	50	60	30		
Holstein				4				4					
Markdale				14	12	5		31					
Meaford				12	30		12	54	95	30			
Neustadt			6		18			24					
Owen Sound	204		78	12	1332	50	126	1802	340	1105	510		
Priceville									20				
Shallow Lake				6				6					
Thornbury			12					12					
Walter's Falls										30			
Woodford			2					2					
Haldimand—													
Canfield	3		3			5		11					
Cayuga									10				
Dunnville	24			18	102	15		159			80		
Fisherville					6	10	6	22					
Hagersville									10				
Jarvis				12	12			24					
Haliburton—													
Gelert	2		2		6	5	6	21					
Haliburton	60		36		60	55	30	241	20		70		
Minden			6	2	6	5	12	31	20		10		

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto, during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. Injections
Halton—													
Acton	1		1	2	30			34		20	10		
Bronte				2				2					
Burlington				72	12	10	6	100	10		15		
Georgetown					42			42		190			
Milton					36			36		20			
Oakville	6			8	6		12	32		10			
Hastings—													
Bancroft									10	150	220		
Belleville	52			48	2412	60	114	2686	80				
Desoronto	1		18			20		39			55		
Eldorado	9		3			20		32					
Frankford			6	12	12	20	24	74	40				
Glen Miller	12			1				13					
Madoc				3	12	10		25					
Marmora				18	18	10		46		60			
Roslin						10	30	40	40	20			
Sulphide									40				
Trenton	24		24	2	36	35	36	157	145	365	80		
Tweed						5	6	11	10				
Huron—													
Brussels				2				2					
Clinton				6		10		16					
Crediton										25			
Dashwood										140			
Ethel				24	5			29					
Exeter				10				10					
Goderich	12		6	12	30	30	24	114	10		55		
Gorrie				6				6					
Seaforth				30	36			66	30		10		
Wingham			4		12	10	30	56					
Zurich										100			
Kenora—													
North Pines										60			
Kent—													
Blenheim									50				
Chatham	72			204	96	115	60	547	255	60	470		
Dresden				10				10	90	100			
Merlin				19				19					
Ridgetown					18	10	12	40					
Tilbury	10							10			15		
Wallaceburg	6							6					
Lambton—													
Brigden	6			12				18					
Camlachie					12			12	10	25			
Forest	6			25	66	40		137		60			
Inwood					12			12					
Petrolia	6				12	5		23	10	30	50		
Sarnia	72		30	24	48	40	66	280	220	50	355		
Thamesville						5		5			10		
Watford				12	24	10	24	70	20	25	5		
Lanark—													
Almonte	24				25	24	120	193					
Carleton Place	2		7	94	5	6	6	120					
Dalhousie Lake				1				1					

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto, during the year 1921

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. Injections
Lanark—*Cont.*									10				
Lanark													
Pakenham					36			36					
Perth	24				24		6	54					
Smith's Falls	36				126			162	55				
Leeds—													
Brockville	36				42	30		108	20	150	250		
Elgin					6			6					
Gananoque					48			48			60		
Lyn					24	25		49		40			
Lennox and Addington—													
Ernestown									10				
Napanee				42				42	70				
Lincoln—													
Beamsville	6		6	1	12			25	20	8			
Grimsby					72			72		200	15		
Jordan									200				
Merriton	3							3					
Niagara-on-the-Lake				4				4		70			
St. Catharines	556			11	552	75	30	1224	470	1020	615		
Smithville					18			18		35			
Manitoulin—													
Gore Bay						5		5					
Middlesex—													
London	1400		800		300	200	396	3096	1175	450	1195		
Parkhill					12	10		22			60		
Strathroy									40	30			
Muskoka and Parry Sound—													
Bala				6			12	18	40	40			
Bracebridge	18		12		18			48					
Burk's Falls							24	24		210	10		
Byng Inlet									10				
Depot Harbor					12	5	6	23					
Gravenhurst	12		12	29	12	20	12	97	10	20	5		
Huntsville	6			2		10		18		10			
Kearney									10		15		
Muskoka				2				2					
Pakesley				12	12	5	6	35	20				
Parry Sound	42		24	6	42	40	24	178	70	245	90		
Powassan	2				42	5		49	20				
South River	18				12			30					
Sprucedale	6					5		11			25		
Sundridge				16	12	10	24	62	40				
Torrance					6			6	10				
Trout Creek			6		12	5	6	29			185		
Utterson				12				12					
Nipissing—													
Algonquin Park					6			6					
North Bay	200							200		820			
Sturgeon Falls					72			72					
Norfolk—													
Delhi	18		6	20	18	10	6	78	40	50	35		
Langton					6			6					

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto, during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. Injections
Norfolk—*Cont.*													
Port Dover					24	5	5	34					
Port Rowan					12	5		17	50	30	35		
Simcoe	68			40	72	15	36	231	80	140	60		
Teeterville	6				6	5		17					
Waterford				6	18	15	12	51					
Northumberland-													
Brighton	24				264			288	20	110	30		
Campbellford	24			21				45	20	600			
Castleton				5				5					
Cobourg	58		12	15	54	25	48	212	10	25	70		
Colborne					12	15	12	39	50				
Cold Springs										10			
Hastings	6			2				8		60	5		
Roseneath				6	18		12	36	20	20			
Warkworth									30	90			
Wooler					6			6					
Ontario—													
Beaverton					42	10	12	64			60		
Brechin				13		5		18					
Cannington										20			
Claremont			6		30	10		46		25	5		
Oshawa	274			58	1392	90	72	1886		540	60		
Pickering						5		5					
Port Whitby				2				2					
Seagrave				1				1					
Sunderland				1	12			13	60	60			
Uxbridge	2		2	28	6	5	6	49					
Whitby	69		6	33		10		109					
Oxford—													
Drumbo				6	12	15		33		40			
Embro				2				2		40			
Norwich										20			
Otterville					6	10		16	30	50			
Tillsonburg	42		6		258	10	36	352	20	20			
Woodstock	12				36	55	12	115	30	40			
Peel—													
Alton					48			48	10	30	15		
Bolton						10		10					
Brampton	4			39	48			91		20			
Caledon				4		20		24					
Clarkson						5		5		35	15		
Forks of Credit				1				1					
Inglewood					30			30			10		
Lorne Park				1				1					
Meadowvale				1				1					
Palgrave						15	24	39			55		
Port Credit				5	6	10		21		25			
Streetsville					6			6					
Perth—													
Atwood				1				1	25		10		
Listowel	6			12		20	12	60					
Mitchell	18		4	12		5	12	51	75	55	30		
St. Mary's									30				
Sebringville				1				1					
Stratford	98			12	30	55	12	207		110	305		

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto, during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. Injections
Peterboro—													
Bailieboro	24			8	18			50	170	60	20		
Havelock			12	28				40		90			
Keene	12				24			36	10		35		
Peterboro	128		50	13	1562	70	72	1895	250	905	460		
Prescott—													
Alfred Station				4				4	50	120			
Fournier			12					12		50			
Hawkesbury					6	5	6	17		45	25		
St. Isadore-de-Prescott	7		1	6	24	15	18	71	40	30	75		
Prince Edward —													
Hillier					36	5		41					
Picton	66			12	6	10	6	100		60			
Rainy River—													
Emo										25	75		
Fort Frances	6						6	12			15		
Stratton									50				
Renfrew—													
Arnprior					6	5		11					
Beachburg										40			
Cobden	24		24		234	5	6	293	60	30			
Eganville						10	12	22		60	70		
Forester's Falls							6	6					
Pembroke	24			48			6	78		120			
Renfrew	12							12			30		
Russell—													
Bourget			12			5		17	80	30	180		
Casselman				6				6					
Clarence Creek				18				18					
Cumberland										50	30		
Embrun						25		25					
Metcalfe					24	5		29		100	15		
Osgoode					6	5		11					
Rockland				4				4		25	5		
Russell						10		10	20				
Vars	6			6	12	5	12	41		30	15		
Simcoe—													
Allandale				2				2					
Alliston	8			5	12	5	60	90		20	10		
Angus					12			12					
Barrie	2			25	174	20	6	227	85	110	115		
Beeton	6							6					
Bondhead					12			12		20			
Bradford	5		5			5		15					
Camp Borden	6							6	50				
Coldwater	6				6	15	6	33			60		
Collingwood	106		56	6	72			240	120	70	135		
Cookstown				1				1					
Craigvale				24				24					
Creemore	12				84	20		116					
Everett				9	6	5		20			5		
Midland	118							118	40	60			
Orillia	48		12	139	252	35	72	558	690				
Penetanguishene	12		6		24	25	6	73					
Stayner				1				1	10	50	10		

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1921

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. of Injections
Simcoe—*Cont.*													
Stroud					24			24					
Victoria Harbor	12		18	2	6	5	6	19	10				
Waubaushene											30		
Stormont—													
Aultsville									20				
Cornwall	18				12	5		35	30	30			
Crysler										190			
Finch									20	70			
Mille Roches									10				
Moose Creek						30	6	36					
Sudbury—													
Burwash	1926		150			30		2106					
Capreol				18				18					
Chapleau	12		12		24	10		58					
Chelmsford									10	20	10		
Copper Cliff	24			60		25		109	50				
Espanola	12			30		10		52					
Sudbury	108			27	48	10	5	198	170		10		
Warren									20				
Webbwood	12				6			18			30		
Thunder Bay—													
Fort William									750	810	545		
Nipigon									10	10	5		
Timiskaming—													
Cobalt	12			12	60	5		89	50		60		
Cochrane	78				48	40	24	190	60	200	120		
Elk Lake											30		
Englehart										300			
Gowganda	6							6		20			
Haileybury	4		18	22		10		54					
Hearst				12	24		24	60			100		
Iroquois Falls	12						6	18	30	30			
Kapuskasing	12		12		12		12	48	150				
Larder Lake	12			4				16	20				
Matheson									770				
Monteith				1				1					
Nellie Lake				3				3					
New Liskeard	24							24	90	150	80		
No th Cobalt						5		5					
Schumacher	12					10	12	34					
SmoothRockFalls									50	10			
South Porcupine	48			24	12	20		104					
Timmins	26		21		12	10	18	87		20			
Victoria—													
Bobcaygeon	12			1	36	5		54			125		
Coboconk					18			18		30	15		
Fenelon Falls				3	6	5	6	20		20			
Kinmount					18			18					
Kirkfield				22				22					
Lindsay	4			24	12	25		65					
Little Britain					24	20		44					
Manilla				4	144	50	60	258					
Omemee	12				30	15	18	75		90			
Woodville						5		5					
Waterloo—													
Ayr			6	12	12	5	24	59	35	50			
Elmira	3		6	1	12	20		42					

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. of Injections
Waterloo—*Cont.*													
Galt	98		72	61	120	80	30	461		40	385		
Hespeler	16			16	12	5		49					
Kitchener	120		48	30	672	200	24	1094	40	600	420		
Linwood					6	10		16					
New Dundee						5		5	20				
New Hamburg	50				42		6	98	10				
Preston	6			2	36	5		49		30	60		
Waterloo	18		24		24		18	84		140	15		
Wellesley									10				
Welland—													
Bridgeburg				8	78	5	36	127	20				
Crystal Beach	6		6	40	12	10	12	86			10		
Fenwick				12	12			24	20	135	30		
Fonthill				1				1					
Marshville							6	6					
Niagara Falls	462		157	175	36	30	60	920	200	50	280		
Port Colborne	12		6		42	15		75	145	10	110		
Ridgeway	4			24		20	6	54	20	20			
Thorold	12							12	20	110	45		
Welland	236		16	6	24	15	12	311		180	230		
Wellington—													
Arthur	6			18				24					
Belwood					12		6	18					
Clifford	6		12	6	6	5	6	41					
Drayton	24				24		30	78	20		15		
Erin						5		5					
Fergus	6			2	6	5	6	25	30	40	55		
Glen Allen									25				
Guelph	713		42	238	510	75	54	1632	170	550	230		
Harriston	72		12		24	5		113		35	30		
Hillsburg				14				14	20	80			
Morriston							6	6					
Mount Forest					6	15	6	27	10				
Palmerston	12							12			35		
Rockwood					24			24			10		
Wentworth—													
Ancaster				2				2					
Bartonville					144			144					
Dundas	6							6					
Freelton										40			
Hamilton	176		12	10		5		203	2390	2280	2720		
Lynden	6			2		10		18			60		
Stoney Creek				26				26					
York—													
Agincourt	13			25	24	20		82	50	10	30		
Aurora	6		12	12	40			70					
Concord				2				2					
Fairbank					216			216					
Frederickton									10				
Islington				8				8					
Keswick				2				2		60			
King									20				
Long Branch				2	12			14					
Maple				1				1					
Markham				15				15					
Mimico	24				2424	5		2453	600	60			

YEARLY REPORT

Outfits, Vaccines and Treatments supplied by Laboratory at Toronto during the year 1921.

Municipalities	Outfits sent out								Doses of Typhoid-paratyphoid Vaccine supplied	Whooping Cough Vaccine	Silver nitrate for prevention of Ophthalmia	Pasteur Preventive Treatment	
	Syphilis (Wassermann)	Syphilis (Treponema Pallida)	Gonorrhea	Water	Diphtheria	T.B.	Typhoid	Total				Cases	No. of Injections
York—*Continued*													
Mimico Beach	12				36		6	54					
Mount Albert					24	5		29			10		
Mount Dennis	6				7	5		18					
Newmarket					6	5		11	50	170			
Newtonbrook				3				3					
New Toronto	12			6	246			264	25	170			
Pefferlaw				1	12		6	19					
Queensville					72	10	12	94					
Richmond Hill	6		6	7		10	6	35			59		
Roaches Point				3				3					
Schomberg	36					10		46					
Stouffville	6					5		11					
Sutton West	10		4	1	12			27	20	20			
Thornhill				2	8		6	16					
Todmorden				2				2					
Toronto	9491		2308	242	22392	250	2850	37533	3195	10008	1265	4	96
Unionville				1				1	10	25			
Weston	16			31	90	20		157	20	150			
Woodbridge										25	5		
Totals	23,540		5,228	3,525	42,746	4,209	6,065	85,314	18,430	33,473	20,185	4	96

Grand Total—93,298.

TABULATED REPORT

of the work of the

BRANCH LABORATORIES

at Kingston, London, Fort William, Sault Ste. Marie and North Bay, for the year 1921.

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-losis Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Bruce—															
Paisley						1		3							
Carleton—															
Metcalfe				1											
Ottawa				1			6	2		24	7		119		
Richmond					1			1							
Stittsville					1	2									
Dundas—															
Chesterville				6		7		3					6		
Iroquois						1							1		
Winchester					1	4		5		1					
Durham—															
Port Hope						1									
Essex—															
Essex							3	1							
Frontenac—															
Collin's Bay				1				1							
Glenburnie															
Harrowsmith				2	1	2									
Kingston	75	428	59	618	46	660	47	147		96	23	4	764		
Portsmouth	7	10	5	17		1	6	19		4		1	52		
Sharbot Lake				3	1	4	3	1		1			3		
Sydenham			1	1		3									
Verona		1		3			3	3							
Wolfe Island				2		1		1							
Glengarry—															
Lancaster			3										1		
Maxville				2	2	3		3					1		
Williamstown						1		2							
Grenville—															
Cardinal			1	6		4	3	3					2		
Jasper			1	1			1	3							
Kemptville					1	1	2	4							
North Augusta	1		1	3											
Prescott			1			1	1								
Hastings—															
Bancroft					1	2	1	3							
Belleville	5	11	45	362	9	33	33	60		1		1	11		
Deseronto				1		1		2							
Eldorado							2	4							
Foxboro'		1	3	9											
Frankford								1							
Marlbank						1									
Roslin						1									
Shannonville					1	1	1	9							
Stirling								1							
Trenton						2									
Tweed			1	2	7	3		3							
Huron—															
Wingham								1							
Lanark —															
Almonte				2						2					
Carleton Place				3	1	3	2	12					3		
Lanark							1								
McDonald's Cnr.							1	1							
Pakenham									....						
Perth			1	4	1	4				1			1		
Smith's Falls	1	1	3	11	4	18	9	22			1		5		

ONTARIO AT KINGSTON, FOR THE YEAR 1921.—SPECIMENS EXAMINED.

Gonorrhea		Rabies Diagnosis				Milk										Waters			Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological											
									Tubercle Bac.		Pus Cells									
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department		
																				4
																				1
26	47																		3	235
																				2
																				3
	2																		2	26
																				2
	2																		2	15
																				1
																				4
																	3			5
																	2			2
1																			2	8
15	52																447		217	3698
	5															12	110			249
2																				18
2	1																			8
																				10
																				4
																2	1		2	9
																				11
																				3
																			1	20
																				6
																21	12			41
																	23			28
																3	6			12
																				7
1	3																9		4	588
																	2		1	7
1	1																2		1	11
	1																			14
																				1
																				1
																				12
																	1			2
																				2
1																5	2			24
																				1
																				4
																			1	25
																				1
																				2
																			1	1
																			1	13
	3																18		2	98

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculosis Sputa		Typhoid Bloods			Syphilis					
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Leeds—															
Athens															
Brockville		3		1	2		10	3	9	2	1	2	24		
Delta							2		1				2		
Gananoque	15	19	6	10	4		3	6	5	1			3		
Lansdowne			1		1		4	1							
Mallorytown				3			1						1		
Seeley's Bay	6	23	4	8					1						
Westport				1											
Lennox and Addington—															
Adolphustown							5								
Bath			1	3			2								
Enterprise			1												
Flinton							1		7				1		
Moscow									1						
Napanee	1	3	10	12	4		7	4	22	1			6		
Odessa								1	3						
Tamworth	2		1	2											
Yarker		1		1					5						
Northumberland—															
Brighton															
Campbellford							6		1			1	2		
Cobourg													3		
Colborne				2	1		9	9	8						
Prescott—															
Fournier	1	1		2	1		4	1	1						
Prince Edward—															
Consecon															
Picton					2		5	1							
Renfrew—															
Arnprior				7	1		3	1	2						
Calabogie							1								
Cobden	12	32	11	36			4								
Hyndford							1								
Pembroke					1		13	1	3						
Petawawa										1			4		
Renfrew				3	3		4		7	1			5		
Westmeath							1	3	3				1		
Simcoe—															
Barrie									2						
Stormont—															
Aultsville															
Cornwall	1		4	8	10		7	6	11	6			12		
Dickinson's Ldg	3			1									1		
Finch				1			1		2	1					
Mille Roches				1											
Moose Creek			1	2			3		3						
Newington				1											
Victoria—															
Lindsay										1			4		
Wellington—															
Guelph							5								
Grand Total	130	534	165	1166	108		868	162	418	144	32	9	1038		

ONTARIO AT KINGSTON, FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk									Waters				
			Negri Bodies			Food Content		Preservatives	Bacteriological										
									Tubercle Bac		Pus Cells.								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial	Liquors for License Department	Miscellaneous Specimens	Total for Year
																	3			3
																7	7			71
1	2																			8
																	5			77
																	3		1	11
																1	2			8
																	2		1	45
																				1
																				5
																				6
																				1
1																	2			12
																				1
1	1															9	13		2	96
																	1			5
																				5
																				7
																2			1	3
																			1	11
																				3
																	9		1	39
2	3																			16
																			16	16
																	2		2	12
1	2																		4	21
																				1
																	5		3	103
																				1
																		3		21
																			1	6
																		2		25
																				8
																				2
																	1			1
2	6																3		1	77
																				5
																				3
																				1
																				9
																				1
																				5
																				5
57	131															62	696	5	274	5999

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very strongly Positive	Strongly Positive	+	−	+	−
Algoma—															
Foleyet													3		
Brant—															
Brantford						2		1		12	4	4	64		
Paris						6		1		1			4		
Bruce—															
Allenford						4									
Cargill						2									
Hepworth	1	1		11		1							2		
Kincardine					1	5		2		1			1		
Lucknow					4	1									
Mildmay	2						1	1							
Paisley															
Teeswater				1		1									
Walkerton					1	5				3			1		
Wiarton															
Carleton—															
Ottawa								2	10	4		1	8		
Durham—															
Cobourg													1		
Millbrook															
Elgin—															
Aylmer			1			2				4			2		
Dutton				1		1		1					2		
Harrietsville						1									
Lawrence Sta.		3	1	2									2		
Port Stanley						1				1			2		
Shedden			1	6		1									
Springfield						2							1		
St. Thomas			1	1		2				20	6	1	49		
Wallacetown						3		1							
West Lorne						1							1		
Essex—															
Amherstburg	5	1	2	73						2			6		
Belle River						1				1			2		
Comber						3		1							
Essex		1											1		
Harrow				1											
Kingsville	1			14		3		2					3		
Leamington	1		1	2		1	1			2			5		
Stony Point															
Tilbury						1		1				1	2		
Walkerville										6			22		
Windsor										76	16	7	223		
Grey—															
Hanover															
Shallow Lake			1												
Haldimand															
Dunnville		4	1	2		1		1							
Huron—															
Bayfield						1									
Clinton								1							
Crediton		4		6	1	1									
Dashwood						2									
Ethel						4									
Exeter		4	2	4	1	4		2					2		
Glen Annan															

ONTARIO AT LONDON FOR THE YEAR 1921.—SPECIMENS EXAMINED.

Gonorrhea		Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples				
									Tubercle Bac.		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	− −	+	−	+	−				Chemical	Bacterial			
																			3
																		1	91
1	1																		14
																			4
																			2
																16	18		50
																		1	11
																23	23		51
																			4
	1																		1
																			2
1	1																		12
																2	2		4
																		1	26
																			1
																		6	6
	4															33	36		82
																		1	6
																4	4		9
																			8
																		1	5
																			8
																			3
																		8	8
																14	14	2	34
	1															2	2	2	9
																			89
																			4
																		1	5
						3							3			14	14		36
																2	2		5
	1																		24
																	1		14
																8	8		16
1	1					1	1	1					1						11
																			28
																		3	325
																5	5		10
																			1
																		1	10
																			1
																2	2	1	6
																1	1		14
																			2
																			4
	1															1	1		22
																		1	1

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis					Spirochaeta Pallida	
	Release		Diagnosis							Wassermann Reaction					
	+	−	+	−	+	−	+	−	Colloidal Gold React'	Very strongly Positive	Strongly Positive	+	−	+	−
Goderich		2	2	7	1	8	1	4					1		
Hensall				6		9				1					
Kirkton	1	7	2	1		3	1						2		
Seaforth		20	7	13	1	1	2	6					1		
Wingham				5	2	17	2	1							
Zurich		1		1	1	21	1			1					
Kent—															
Blenheim					5	11	2	6		3			7		
Chatham	2	6	5	19	18	36	3	8		8	1	1	37		
Dresden			1		1	4	1	2	2	1			1		
Duart				2	1	3									
Harwich															
Highgate	1					2		1					1		
Merlin		2		9		6	1	1		1			12		
Ridgetown	8	2	8	45	3	19		7					5		
Thamesville		1	1	10		11	1	10		1	1		3		
Tupperville										1			6		
Wallaceburg	1			2		7				6	2		14		
Wheatley				5				2		1					
Lambton—															
Alvinston						1	1								
Arkona			1	2									1		
Brigden															
Camlachie		5	1	8		5		5							
Courtright						1									
Florence						1									
Forest		9	3	30		7	1	2		1	1		1		
Inwood				1		1							2		
Mooretown															
Oil Springs						1									
Petrolia	2	5		10	1	7									
Port Lambton								1							
Sarnia	1	4	17	55	5	22	5	14		22	3		69		
Thedford		1		2		2	2	4					1		
Watford				7		3		4					2		
Wyoming	1							2							
Lincoln—															
Niagara-on-the Lake													2		
St. Catharines															
Middlesex—															
Adelaide						2							1		
Ailsa Craig				1				1							
Arva		6	1												
Belmont			1	3		1							1		
Byron						14			1	16	1		36		
Dorchester			1	6	1	9	3	10		2			1		
Glencoe	1	3	2	1	1	1									
Granton	4	5	4	15	2	3	3	5							
Hyde Park										1	2	2	16		
Komoka						1									
Lambeth					1	8							2		
London	428	795	267	1252	98	335	102	161	166	307	61	114	1200		
Lucan	7	2	7	28		3	1	4							
Melbourne						2		4							
Mt. Brydges	3	9	3	21	1	3							3		

ONTARIO AT LONDON FOR THE YEAR 1921.—SPECIMENS EXAMINED.—*Con.*

Gonorrhea		Rabies Diagnosis				Milk											Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies						Bacteriological												
		Animal			Animal Inoculations	Food Content		Preservatives		Tubercle Bac.		Pus Cells		Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
+	−		+	−		Fats	Total Solids	+	−	+	−	+	−								
2	3					37								27			13	12		5	125
																	1			1	18
																	1	1			19
	5																11	6		2	70
																	1	1		1	35
																				2	28
																	2	2		1	39
6	3																	133		6	292
																					13
																				1	7
																				1	1
																				2	7
																	1	1			34
																	1	4		5	110
2																				3	44
	1																				8
	3					5								4			3	3		1	51
																					8
																	8	8			18
																					4
																	5	7			12
																	1	1			26
																				1	2
																					1
1																	2	2		3	63
																					4
																	3	3			6
																				1	2
																					25
	1																				2
7	13					13								27			25	22		9	333
1	1																			2	16
																	26	26		3	72
																					3
																					2
																				3	3
																					3
																					2
																					7
																				1	7
														13						13	94
					1															4	38
																	1	1		1	12
																	3	3			47
	1																				22
																	10	10			21
																	1	1		4	17
65	185					872								1175			34	188	8	437	8250
																					52
																	1	1		3	11
	11																2	5		7	58

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-lous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Spirochaeta Pallida	
										Very Strongly Positive	Strongly Positive	+	−		+	−
	+	−	+	−	+	−	+	−								
Newbury				1	2	4	1	4								
Parkhill		2		2	1	1		5					1			
St. John's		1	1													
Strathroy				4	1	14		2	1	1			4			
Thorndale		2	1	14	2	9		4								
Wardsville					1	5							2			
Nissouri W.																
Nipissing																
North Bay												1	3			
Norfolk																
Courtland						6		4			1					
Delhi				1												
Northumberland																
Campbellford																
Ontario																
Whitby								1	5	6	1	1	41			
Oxford																
Brownsville						4		1								
Burgessville				4												
Ingersoll	4	16	7	52	4	22	6	13		8	1		17			
Innerkip				3	2	3										
akeside	3	14	5	2		1		1								
Mt. Elgin	1	12	1	5			1	1								
Plattsville																
Springford											1					
Tavistock						1				1		1				
Thamesford				6	1	6	1	4								
Tillsonburg						2		1		1			1			
Woodstock	2	9	5	30	4	28	1		1	6			22			
Perth																
Listowell	1	2	1	2		4	2	9	2				6			
Mitchell		2		2		4							4			
Sebringville	1			6		2		2					1			
Stratford	1	3	2	22	9	31	2	2	5	19	2	1	46			
St. Mary's			1	12	1	11	3	7		1			2			
Peterboro																
Peterboro	2			1	1	1	1	2		1			6			
Simcoe																
Collinwood										1						
Camp Borden													1			
Stormont																
Cornwall					1											
Waterloo																
Ayr		1		5												
Baden		1		3												
Galt	1				1	9	1	4	1	1	1		5			
Kitchener	3	20	2	26	9	18		4	1	34	6		160			
New Dundee					1	1	1									
New Hamburg			1	2												
Waterloo	2					1	1	4					1			
Wellesley				1	1	7		1								

ONTARIO AT LONDON FOR THE YEAR 1921.—SPECIMENS EXAMINED—*Con.*

Gonorrhea		Rabies Diagnosis				Milk									Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Contents		Preservatives	Bacteriological				Count	Extraneous Matter	Number of Milk Samples				
									Tubercle Bac.		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	+	−	+	−				Chemical	Bacterial			
																			12
																1	1		14
																8	9	1	20
	1															3	3	9	42
																1	1	1	35
																			8
																2	2		4
																			4
																			11
																			1
																		2	2
																		3	85
																			5
																1	1		6
																8	8	4	180
																1	1		10
																			26
																		1	22
																			1
																2	3		5
1																		2	6
																1	1	3	23
	5															1	1	2	14
	3															18	18	8	155
	2															18	18	6	73
																1	1	10	24
																1	1	1	15
11	17																	9	182
																1	1	4	45
																		2	17
																			1
																			1
																			1
																			6
																			4
1																3	3	3	34
1	2															1	1	18	306
																			3
																3	1		4
																		2	11
																9	9		28

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tubercu-losis Sputa		Typhoid Bloods		Syphilis						
	Release		Diagnosis							Wassermann Reaction				Spirocha-eta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Wellington															
Alma													1		
Glenallen															
Guelph				1		7	2	2	37	42	3	5	89		
Harriston		2	1	2											
Moorefield															
Mount Forest						1				1			6		
Welland															
Niagara Falls													1		
Wentworth															
Lynden				5		1									
York															
Toronto										1			1		
Grand Total	491	1009	373	1905	193	852	158	360	232	630	114	140	2258		

ONTARIO AT LONDON FOR THE YEAR 1921.—SPECIMENS EXAMINED. *Con.*

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Conten		Preservatives		Bacteriological										
										Tubercle Bac.		Pus Cells								
+	—	Animal	+	—	Animal Inoculation	Fats	Total Solids	+	—	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																			1	2
																			1	1
																			4	192
																			1	6
																	1	1		2
																				8
																				1
																			1	7
																				2
101	258				1	932	1		1					1259			371	659	8	655	12, 592

Numbers in miscellaneous column include:—Free urines, gastric contents and chemical miscellaneous samples; Division of Chemistry and Exudates, blood counts, blood cultures, Vaccines and free tissue examinations Division of Pathology.

Approved

H. W. Hill
Director

Laboratories, Fort William, January 27th, 1922.

Dr. J. W. S. McCullough, D.P.H.,
Chief Officer of Health,
Spadina House, Spadina Crescent.
Toronto, Ontario.

SIR.—I have the honour to submit herewith summarized report of the work done in this laboratory during the year 1921. It is noteworthy that substantial increases have been made in all departments over the previous year, showing that the district physicians as well as the city physicians are co-operating with the local health officers and the board in protecting the health of the community from infectious diseases and curtailing the spread of venereal diseases. Since the venereal clinic has been established here, the serological work has increased considerably; further it is pointed out that we now have a good system for early diagnosis of suspected syphilitic sores in that these cases are sent into the laboratory immediately and a dark field examination made; during one week last fall 3 diagnoses were made in this way before the Wassermann was positive and, since the cases have had vigorous anti-syphilitic treatment, the Wassermann has remained negative in these cases and in subsequent cases; we believe that these cases represent cures although time alone will tell; yet we are convinced that if all fresh cases could be handled in this way the millennium might be reached as regards syphilis, in that this scourge might be finally wiped out.

Special mention might be made with regard to water analysis. Dr. G. L. Sparks, our district health officer has put forth unceasing effort in urging the municipalities to have repeated analyses of their water supply made at regular intervals. Nearly 400 analyses have been made during the year, indicating in a specific way the interest he has aroused in the community regarding the importance of a sanitary water supply.

Sterile containers were prepared and sent out from this laboratory for all the specimens examined during the year.

All of which is respectfully submitted.

Faithfully yours,

M. O. THOMAS,
Director of Laboratory.

Diphtheria(swabs)		688
Release from quarantine		
Positive	97	
Negative	140	
Diagnosis		
Positive	101	
Negative	350	
Tuberculosis (sputum)		347
Positive	54	
Negative	293	
Typhoid (Widal-blood test)		77
Positive	27	
Negative	50	
Syphilis:—		
Colloidal gold test		16
Wasserman test		886
Very strongly positive	151	
Strongly positive	13	
Positive	20	
Negative	702	
Treponema pallida (dark field exam.)		13
Positive	7	
Negative	6	
Gonorrhea		266
Positive	75	
Negative	191	
Rabies (cases inoculated)		1
Milk analyses		334
Fat content	326	
Total solids	1	
Preservatives	2	
Bacteriological count	5	
Water analyses (bacteriological)		390
Miscellaneous specimens		611
Total for year 1921 (Fort William Lab.)		3,629

In addition biological products have been distributed from this laboratory throughout this district as follows:

Diphtheria antitoxin	5,195,000 units.
Tetanus antitoxin	65,000 units.
Antimeningitis serum	10 vials.
Smallpox vaccine	7,250 points.
Typhoid vaccine	55 bottles.
Influenza vaccine	25 bottles.
Pertussis vaccine	80 bottles.
Silver nitrate ampules	85 boxes.

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Colloidal Gold Reaction	Wassermann Reaction					Treponema Pallida	
										Very Strongly Positive	Strongly Positive					
	+	—	+	—	+	—	+	—				+	—		+	—
Cameron Falls				1	1	1				3			2			
Chapleau			1													
Dryden				1												
Emo							1									
Foleyet				4									2			
Fort Frances				6	3	12	3	1		2	1		8			
Fort William	80	93	56	140	42	236	18	32	10	106	6	10	534		5	6
Hornepayne													1			
Hymers																
Ignace	1	13	4	47												
Jellicoe				4												
Keewatin	1		1	5		1	4	6		4			7			
Kenora						2										
Murillo																
Neebing				2												
Nipigon				2	1			1								
Port Arthur	4	5	20	51	6	39	1	9	6	28	6	10	116		2	
Rainy River		12	7	39	1											
Schreiber				4												
Sandpoint										3			13			
Sioux Lookout	11	12	8	39		1				5			19			
Stratton		5	4	5		1		1								
Total	97	140	101	350	54	293	27	50	16	151	13	20	702		7	6

ONTARIO AT FORT WILLIAM, FOR YEAR 1921.—SPECIMENS EXAMINED.

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives	Bacteriological											
									Tubercle Bac.		Pus Cells									
+	—	Animal	+	—	Animal Inoculations	Fats	Total Solids	+	+	—	+	—	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	9	26
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	1	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	..	45
60	182	..	..	..	..	221	1	2	..	..	..	..	2	221	226	..	37	..	430	2756
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	65
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19	..	..	50
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50	..	..	52
..	..	..	..	..	..	26	..	..	..	..	..	..	..	25	26	..	..	..	..	77
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	28	..	..	34
5	4	..	..	..	1	78	..	..	..	..	..	..	2	72	80	..	86	..	160	791
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	..	68
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	97	..	..	101
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16
8	3	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	10	119
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	1	27
75	191	..	..	..	1	326	1	2	..	..	..	..	5	318	334	..	390	..	611	3629

Certified correct
N. O. Thomas, M.B.

Director

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheritic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis							Wassermann Reaction				Spirochaeta Pallida	
	+	−	+	−	+	−	+	−	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	−	+	−
Algoma—															
Blind River			2	2						1	1				
Bruce Mines		1	4	2	1		1						1		
Cutler			1	1	1										
Desbarats	35	54	26	71	1	5		1		1	2		4		
Franz			7	8											
Hearst			1	1											
Hilton															
Hilton Beach				2											
Korah															
Neevish															
Nesterville				1			1						1		
Prince															
Richards Ldg	1	1	1	5		1									
Sault Ste Marie	176	265	245	625	25	97		13	4	64	59	19	182	4	4
Searchmount			3	2											
Spragge															
Steelton															
Tarentorus					1										
Thessalon	2	1	1							1					
Manitoulin—															
Gore Bay			1												
Sudbury—															
Chelmsford															
Espanola			1		1										
Massey															
Sudbury													1		
Webbwood			2	1			1	1							
	214	322	295	721	30	93	3	15	4	67	62	19	189	4	4

ONTARIO AT SAULT STE. MARIE, FOR YEAR 1921. SPECIMENS EXAMINED.

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																			2	8
																				10
																	4			7
4	1																10	7	3	225
																				15
																				2
																	2	2		4
																			1	3
																			3	3
																	1	1		2
																	7	7		17
																			3	5
																	11	11	2	33
91	67					243	243	4	4		17		1	479	41	426	345	1339	685	5757
																				5
																	2	5		7
																	3	3		6
																			3	4
																			2	7
																				1
																	2	2		4
																				14
3	1					2	2							2		2	6	6		12
																			1	2
																				5
98	69					245	245	4	4		17		1	481	41	428	393	1383	707	6158

REPORT FROM LABORATORIES OF THE PROVINCIAL BOARD OF HEALTH OF

Municipalities	Diphtheretic Swabs				Tuberculous Sputa		Typhoid Bloods		Syphilis							
	Release		Diagnosis						Wassermann Reaction						Treponem Pallida	
	+	—	+	—	+	—	+	—	Colloidal Gold Reaction	Very Strongly Positive	Strongly Positive	+	—		+	—
Algoma—																
Hearst				1												
Gogama	1	2				1										
Manitoulin—																
Gore Bay													1			
Little Current	2	7	3	1												
Manitowaning																
Nipissing—																
Field		1														
Garson Mines						1										
Mattawa					1	1										
Milnet																1
North Bay	84	136	40	81	21	74	19	12		25	6	15	100			
Sturgeon Falls	14	30	9	6	4	5	3	1		1		1				
Parry Sound—																
Burk's Falls	30	72	29	90			1									
Callander										1			1			
Kearney							1									
Magnetawan																
Pickerel																
Powassan	19	28	12	26									1			
South River	1	7		16												
Sundridge	11	12	3	8	3	2		3		1			1			
Sudbury—																
Capreol		1	2	3						1						
Chapleau		2	1	4												
Coniston														3		
Copper Cliff			1	1												
Espanola																
Sudbury	1	1	1	1	1	6	1	1		11	4	2	38			
Worthington													1			
Temiskaming																
Cobalt	2	3	2	11	1	9		3		3			7			
Cochrane								2	1	2			7			
Englehart			1	2	1	2	1						2			
Gowganda					1								1			
Haileybury		1	3	3	6	7	7	2		2			4			
Iroquois Falls				1	1		2	3								
Kapuskasing							4									
Kirkland Lake							1									
Matheson																
Monteith				1												
New Liskeard	2	2	1	1	6	3	3	1		2		1	4			
Schumacher					1	3				1			2			
Smooth Rock Falls																
South Porcupine				2									1			
Swastika																
Timmins			1	1	3	9	19	3		3	1	1	13			
	167	305	110	259	50	124	61	31	1	53	11	20	187			1

ONTARIO AT NORTH BAY FOR THE YEAR 1921. SPECIMENS EXAMINED.

Gonorrhea		Rabies Diagnosis				Milk										Waters		Liquors for License Department	Miscellaneous Specimens	Total for Year
			Negri Bodies			Food Content		Preservatives		Bacteriological										
										Tubercle Bac		Pus Cells								
+	−	Animal	+	−	Animal Inoculations	Fats	Total Solids	+	−	+	−	+	−	Count	Extraneous Matter	Number of Milk Samples	Chemical	Bacterial			
																					1
																					4
																					1
																		7			20
																		5			5
																					1
																					1
																					2
																		4			4
	34	68														53		184		7	960
		20																4			98
																				3	225
																					2
																					1
																		2			2
																		4			4
																					86
																					24
		1																13			58
																		28			35
																					7
																					3
		1																57			60
																		12			12
	2	5																56		2	133
																					1
	2																	24			67
																		19			32
		1																			10
																					2
	4	17																23		1	80
																					7
																		9			13
																					1
																		3			3
														1							1
	2	2														1				3	34
	1																	4			12
		4														2		9			11
																					7
																1					1
	2	6																15			77
	47	125												1		57		482		16	2108

ANNUAL REPORT, DIVISION OF INDUSTRIAL HYGIENE.

Progress in the field of industrial hygiene seems to rest primarily on two things:

(1) Close co-operation between plant health service and *adequate* municipal health service.

(2) The establishment by employers of plant health service, either individually or in groups, under trained health officers, for the prevention of sickness in industry.

With reference to the first point, a part-time health officer finds himself unable to provide the type of municipal health service required for the best results.

In Ontario the second consideration occupies the attention of the Division of Industrial Hygiene.

Such an object cannot be attained without the active co-operation of employer and employee. Many recognize the advantage of health to the individual and the plant now—but many must be shown. Any such effort involves a knowledge of existing conditions; in fact, they move hand in hand.

Maintenance of General Information Bureau on Industrial Hygiene.

(1) Accumulation of material on theory and practice of all branches of industrial hygiene in other countries and in Canada.

The material in hand includes general works, records of action taken for the promotion of industrial hygiene by government departments and records of the progress of scientific research, health legislation, statistics and data on mortality and morbidity of industrial workers, surveys of various industries, reports of plant physicians and industrial engineers on special problems, etc., etc.

(2) Means adopted for making such material available for manufacturers, plant physicians, sanitarians, industrial engineers, foremen, welfare workers, etc.

(a) *The General Public.*

Articles published in newspapers and journals.

The industrial health moving picture: This moving picture, which is the first to be produced on industrial health specifically, was written in the Division and acted under direction of the Division in a Toronto factory. The subject deals with personal hygiene and such measures for health protection as rest with the workers themselves—living conditions, food, clothing, use of plant welfare facilities, recreation, etc.—are covered.

The moving picture was shown in Toronto theatres, in one Toronto factory, and is being shown in other towns and factories in Ontario.

The exhibit: This took the form of a huge mechanical toy showing the effects of good and bad health conditions throughout the different stages of life.

(b) *Employers.*

Articles in *Industrial Canada.*

Answers to requests for information.

(c) *Employees*—Foremen.

Articles published in the Y.M.C.A. Industrial Bulletins.

(d) *Medical Health Officers in the Field.*

These have been supplied with reports on the main problems in industries within their districts, showing the hazards to be looked for and the requisite preventive measures.

Entry to Industry.

The time to begin safe-guarding the health of workers coincides with the entry into industry from school. Recent legislation in Ontario requires that all such children obtain employment certificates verifying age. No provision is made for physical examination or recommendation to the child or his parent as to occupations which would be harmful to health considering any disability present.

As part of an attempt to determine what is happening in this respect, in co-operation with the Department of Education and City Health Department the school medical histories of school children in Toronto who left school for work in 1920 and 1921 were reviewed.

This was calculated to show the proportion of children entering industry with physical handicap.

This new use for these records renders additional information necessary without greatly increasing the effort involved.

Recommendations made in this connection have been acted upon by those responsible.

On account of the unemployment situation the opportunity was presented for determining the industrial and medical histories of a group of children who have been away from school from one to three years and are now applying at the Ontario Government Employment Bureau for work.

Physical examinations have been conducted of a number of these boys and the findings compared with their school medical histories, in order to form an idea as to how far preventive health measures could be expected to give results.

This work is proceeding slowly.

Investigation and Demonstration.

1. *Spray Painting.*

At the request of the Committee on Industrial Fatigue, all arrangements were made for an investigation by the Department of Pharmacology of the University of Toronto into the hazards to health involved in the use of the paint spraying machine. At the time it was not possible to locate any instance where this work was being done out of doors. At present that side of the investigation is being arranged for.

The report in reference to inside spray painting is awaiting publication in the *Journal of Industrial Hygiene.*

Specific recommendations to employer as to exhaust power, etc., required are delayed pending the discovery of some simple practical means of measuring their effectiveness for different sizes and shapes of hoods. This appears to be nearing solution.

The investigation showed that exhaust systems can adequately provide protection to the worker where the spray painting machine is used on product.

The question of hazard from the use of the volatile bodies—thinners and driers—is inherent in this investigation but will be referred to later.

2. Incidence of Lead Poisoning.

A beginning has been made in an effort to determine the extent of lead poisoning among workers exposed to lead.

A clinic has been established at "Spadina House" for the physical examination of such men exposed as are willing to appear.

The plan provides that workers should be examined in industrial groups:

(a) House painters.

(b) Employees in paint manufacturing plants.

(c) Employees in electric accumulator manufacturing plants.

(d) Employees in furniture manufacturing plants, etc.

It is already apparent that the investigation must include inquiry into the hazards involved in the use of volatile bodies.

Concurrently with the examinations, laboratory investigation is proceeding in the attempt to throw further light on the content of these volatile bodies in the air, which is injurious, and on the effects to the human subject of small doses continued over long periods of time.

Apparatus for collecting air samples for detecting the presence of pigment in volatile bodies requires attention.

3. Miners' Phthisis.

In co-operation with the Chief Inspector of the Department of Mines, an investigation is being made to determine whether miners' phthisis is being produced among hard rock miners in Northern Ontario.

Men who answered three requirements were chosen for examination:

(1) Had not worked in any other mining camp.

(2) Had worked in one camp for periods varying from 6 to 10 years.

(3) Had worked underground throughout that time as driller or mucker.

General and special chest examinations were arranged for—the latter conducted by Dr. J. H. Elliott, Chest Specialist.

Stereoscopic X-ray plates were taken and their special examination provided.

Dust content and air currents were measured. Microscopic and petrographical examinations were made of the rock, the dust, and tailings.

Investigation showed cases of incipient miners' pthhisis.

As a result mine managers in Northern Ontario are placing no further orders for dry drills so that shortly the wet drill will be in use generally.

The report on this investigation will be forthcoming in the near future.

4. Occupational Diseases.

General.

Individual instances of suspected occupational disease have presented themselves, commonly from the Factory Inspection Division of the Labour Department and from private physicians.

Records of occupational disease incidence from official sources indicates that they are rare. (Workmen's Compensation Report for 1921 shows 5 cases of lead poisoning compensated and no other cases of illness among the 7 occupational diseases for which compensation is paid under the Act).

The few widely separated types of cases coming to the attention of the Division indicate that value would ensue from some method whereby physicians would report cases of actual or suspected cases of occupational disease to the Board of Health. Such procedure would draw to the attention of the general practitioner the occupational factors in illness to our mutual benefit.

Benzol Poisoning.

One death and one case of illness from benzol poisoning occurring at the same time in the same establishment were investigated. Huge tanks for storing oil were being painted with a paint of a high drying power containing a large proportion of benzol.

Preventive measures were recommended which enabled the workmen to proceed with this operation unharmed.

Denatured alcohol.

Three cases of dermatitis associated with the use of denatured alcohol for cutting shellac and varnish in picture moulding manufacture were reported by an employer.

Repeated analyses of the alcohol have failed to reveal the real cause of the trouble. Investigation of the conditions of work have not been more successful.

Special eye examinations show no signs of methyl alcohol poisoning.

Temporary preventive measures have served to relieve the situation. The whole question is being reviewed. Methyl alcohol will no doubt receive additional consideration as progress is made with the paint investigation.

Arseniuretted Hydrogen.

The evolution of arseniuretted hydrogen gas in an electric accumulator manufacturing plant was considered as a possible cause for illness there. Investigation showed that the difficulty in this case was not attributable to this source and the question of arseniuretted hydrogen poisoning there can be set aside on account of need for arsenic free lead, and sulphuric acid, in the processes.

There are other suspected cases of occupational poisoning receiving consideration at the moment.

Service rendered to plants in such instances and as a result of the special investigations which are being conducted along lines of occupational disease should emphasize the importance of health and consideration of the best means of ensuring it.

5. *Thorold.*

The services of the public health nurse have been enlisted to indicate something of what can be done to eliminate sickness in industry and show the inter-relationship between general community and industrial health which prevents loss to all.

The Child Welfare Division of the Provincial Board of Health detailed two nurses, one with industrial experience, to conduct public health activities for the community of Thorold including its industries. The co-operation of the Medical Health Officer and of the employers of the plants concerned was readily obtained. This is essential to such a demonstration.

The town was divided into two parts. On the general community side, contact with the inhabitants was established through house to house survey, well-

baby clinics, and birth registration; on the industrial side, through one hour spent daily at the plant dispensaries when *first aid* was given for cases of accident and sickness and absentee lists provided by the plants. All visits arising out of these contacts were grouped. Each nurse visited in her own section of the community, thereby avoiding much duplication of visits in the area covered, and correlating visits for adults and children of different ages.

Value, where assessable, ensuing from these visits in the case of employees—with their consent—was drawn to the attention of employers concerned in a monthly report, in the hope that where not already appreciated they would see the value of such work.

As a result the town of Thorold and the four industries concerned have united in securing the services of a public health nurse for general community and industrial preventive work, payment of her salary and expenses contributed to by employers on a per-employee basis.

The economic conditions obtaining during the year 1921 have not been conducive to expansion by employers or others along new lines of endeavour. Such progress as it is possible to report is dependent solely on the co-operation of employers and employees, the advice and assistance of many interested in the social and technical phases of the work, both within and without the organization of the Provincial Board of Health, and—to the untiring effort of the immediate staff of the Division and those associated with it for field work.

ANNUAL REPORT, DIVISION OF VENEREAL DISEASES.

SIR,—I have the honour to submit the following report of the Division of Venereal Diseases for the year ending December 31st, 1921.

Broadly speaking, the plan detailed in the annual report of 1920 has been followed during the past year although the volume of work has necessarily expanded very much.

The personnel of the Division during the past year has consisted of three physicians, one social service nurse, and one stenographer.

The amount of money available for V. D. work was $120.000, of which $57,473.68 was advanced by the Dominion Government.

1. *Diagnosis*

(*a*) *Laboratories*—

There were six Provincial laboratories where Wassermann's dark field examinations for spirochaetes and examinations of smears for gonococci were carried out free of charge. These six laboratories were located at Toronto (main laboratory) London, Kingston, Fort William, North Bay and Saulte Ste. Marie. Two additional laboratories are now open in Owen Sound and Peterborough. In order to show how these laboratories are appreciated by the physicians of the Province and how much they are used, a short résumé of the examinations made (including the results) for syphilis and gonorrhoea is here inserted.

	Wassermann's.			Dark field examinations.			G.C. examinations.		
	Pos.	Neg.	Total.	Pos.	Neg.	Total.	Pos.	Neg.	Total.
Toronto	2,596	13,024	16,620	25	75	100	493	1,604	2,097
London	773	2,372	3,145				99	206	305
Kingston	185	1,040	1,225				59	131	190
Fort William	184	702	886	7	6	13	75	191	226
Sault Ste. Marie	136	195	331	4	4	8	95	71	166
North Bay	89	191	280	0	2	2	54	148	202
Total	3,963	17,524	22,487	36	87	123	875	2,351	3,226

The laboratories also report that the following new cases were diagnosed as cases of syphilis or gonorrhoea by Wassermann test or smear examination during the year:—

	Syphilis	Gonorrhoea
Toronto	1,083	380
London	532	94
Kingston	197	61
Fort William	99	77
Sault Ste. Marie	30	15
North Bay	55	47
Total	1,996	674

There are also laboratory examinations for venereal disease made in the city laboratories of Toronto, Hamilton and Ottawa, and at the Toronto General Hospital and Grace Hospital, Toronto. The figures for these laboratories are unfortunately not available but represent a very substantial total. There are also examinations made by private laboratories and by physicians in their own laboratories. These figures are also not available.

(*b*) *Reporting of cases by Physicians*—

The number of cases of venereal disease reported by physicians during the year 1921 was as follows. (For purposes of comparison the figures for 1920 are given).

Diseases	1921 cases	1920 cases
Syphilis	2477	1740
Gonorrhoea	2554	2158
Chancroid	61	82
Total	5092	3980

It will be noticed that during the past year there has been a very marked increase in the number of cases reported. It is considered that this is largely due to the fact that physicians are reporting their cases better and also to the fact that cases that go to the clinics for treatment are all reported.

There is, however, still a great deal of work necessary to make the cases reported more nearly approach the true number of cases of venereal disease in the Province. It is hoped that there will be a gradual steady improvement in the reporting of cases by physicians.

2. *Treatment*

(*a*) *Clinics*—

The special proposition of the Board with reference to the establishment of V. D. clinics in the larger cities has been extended during the year to several more of the larger cities of the Province. At the beginning of 1921 there were nine clinics established and in operation in Ontario. Four of these were established in the last three months of 1920. Since the beginning of 1921 four additional clinics have been opened as follows:—

Owen Sound	—Office Building	Mar. 15, 1921.
Brantford	—Brantford General Hospital	May, 19, 1921.
Ottawa	—Ottawa General Hospital, Water St.	July 13, 1921.
Fort William	—McKellar Hospital	Sept. 1, 1921.

There are in all thirteen clinics in Ontario where free treatment, under the directions of the Provincial Board, may be obtained. These clinics are, practically without exception, growing rapidly and giving good satisfaction. Undoubtedly

hundreds of cases, which otherwise would have received very insufficient or unsatisfactory treatment, have been efficiently treated; they have, therefore, not become a menace to the general public, but have become instead of a charge, an asset to the province.

The Division expects to complete arrangements with two or three other cities for the early establishment of venereal disease clinics in these cities.

In connection with the clinics the medical treatment for syphilis is excellent, but it is more difficult to treat gonorrhoea in men satisfactorily, as thoroughness in examination is very necessary for diagnostic purposes and in large clinics on account of lack of time this is very difficult to arrange. The treatment of gonorrhoea in women is satisfactorily carried out, and the results are on the whole encouraging. I believe that physicians who work in these clinics and who are at present giving their time free should be paid at least an honorarium, especially for the night clinics. I wish here to express my appreciation to those physicians in the clinics who have cheerfully given their time and ability, often at great personal disadvantage, in order to make the clinics a success.

The number of out-patient treatments given during the past year was 41,707. These included the treatments given for both gonorrhoea and syphilis. The number of in-patient treatments given in the hospitals where there are clinics was approximately 25,000. All in-patients treated in hospitals were referred to private physicians or clinics for further observation and treatment on discharge from hospital. In this way treatment was not allowed to lapse but the tendency was to carry it to a finality and to obtain a cure. Hospitals, clinic physicians and the social service nurses have all assisted, but too much praise cannot be given to the social service nurses for their unselfish and devoted work in persuading patients to carry on their treatment. This type of work is often disheartening and the fact that very few cases are lost speaks well for the work being done by these nurses.

In connection with the work done by the social service nurses in the clinics, the following statistics are of interest:—

(1) Two hundred and fifty sources of infection were located and placed under treatment during the year. Besides these, sixty-five parents, whose syphilitic children were under treatment, were examined, found to be suffering from syphilis and placed under treatment.

(2) The average number of visits made by the thirteen social workers per month was 320, or during the year 4,160 visits were made to investigate home conditions, locate patients attending irregularly, locate contacts, etc. This amount of work naturally was of the greatest possible value to the community concerned. Besides these visits many cards are sent to patients who missed their treatments urging them to return. This necessitated a great deal of clerical work but saved many unnecessary visits.

(3) The average number of patients attending the various clinics during a month was 1,425. The number of patients treated during the year was just over 5,000.

(4) The number of patients who failed to report for treatment and who were persuaded to return and continue treatment was 906.

(5) The number who were lost was 674.

(6) The number of patients whom the police persuaded to return for treatment was 34 and the number arrested only 31.

These facts show the value of the nurse, as less than ten per cent. of the patients under treatment during the year were lost. The astonishing point in this connection is that of this ten per cent. many turn up within the course of a

year or two, being located in various ways. It should be understood that the figures of (6) do not include those individuals who are discovered, while in custody, to be suffering from a venereal disease, but only includes incorrigibles who cannot be handled except by legal measures.

(b) Treatment in Smaller Centres—

It has not been feasible, as forecasted in the 1920 report, to establish clinics in the smaller centres. In the case of the smaller centres, on request from the M. O. H., a specialist from the Division has proceeded to the centre and has instructed local physicians in the treatment of venereal disease cases when the patient is not able to pay, arranging that the local physician will carry on the further treatment required. In this way, besides arranging for efficient treatment of these scattered cases, the physicians locally have received up-to-date instruction in the treatment of venereal disease. This scheme has been eminently satisfactory and over seventy-five visits of this character were made during the year and over two hundred physicians received instructions in the administration of salvarsan and in other V. D. treatment methods.

The main laboratory at Toronto arranges to send such material as sterile distilled water and sodium hydrate to the physicians carrying on the treatment in the case of syphilis. The entire scheme has received unqualified approval from the medical men of the province.

During the year 500 individuals were carried on the files of the Division because they were moving from one municipality to another. Practically 100% of these were placed under treatment through the local Medical Officers of Health. This was particularly valuable as continuity of treatment was thus ensured.

(c) Treatment in Institutions—

The diagnosis and treatment of venereal diseases in the Provincial Reformatories has been a very important part of the work performed. Whole hearted co-operation has been received from the physicians of the institutions, especially at Guelph Reformatory and the Burwash Industrial Farm. The treatments in these institutions have been as a rule carried out by the specialists of the Division with the assistance of the physician in the institution. During the past year twenty-five trips were made to the Burwash Industrial Farm and approximately two hundred and fifty injections of salvarsan and three hundred and seventy-five special treatments for gonorrhoea were carried out. In the same time thirty-two trips were made to the Guelph Reformatory and three hundred and twenty injections of salvarsan and the same number of treatments for gonorrhoea given.

The following table summarizes the work carried on in the reformatories in Ontario during the past year:—

	No. of Visits	Syphilis Treatments	Gonorrhoea Treatments
Burwash Industrial Farm	25	250	375
Mercer Reformatory	52	1300	nil
Guelph Reformatory (Opened Apl. 1921)	32	320	320
Women's Farm, Concord	8	(Supervision)	
Mercer Reformatory	52	1300	nil*
Ontario Jails	8	(Supervision)	

*G. C. treatments in the Mercer Reformatory are carried out by the physician of that institution.

The treatment carried out in the reformatories and the Jail Farm at Concord is of the very best. The results are excellent and, generally speaking, the physicians in the institutions are keenly interested in the work. The same cannot be said for the Jails in the province where the venereal treatment carried out is far from satisfactory, due to various causes. It may not be possible to remedy this condition for some time but attempts are constantly being made to improve the situation.

I am of the opinion that the type of girl found in the Mercer Reformatory could be handled to better advantage by a female physician and have recommended that, as soon as possible, a female physician of outstanding ability be appointed for this purpose. This physician should be specially trained in the treatment of venereal disease as this type of work will utilize perhaps half of the time spent at this institution. I should consider that at least two and a half days per week will be required to efficiently carry out the venereal disease treatments.

I cannot leave the treatment in institutions without mentioning especially the excellent work being done in the Mercer Reformatory in connection with V. D. treatment by the resident nurse.

The results of the examination of prisoners by the Wassermann test has been of great practical value and has given an idea of the extent of V. D. among this class of the population.

Burwash Industrial Farm, 1920-1921.

			Positive
1920	No. of Wassermanns	1301	130
1921	No. of Wassermanns	1306	89
	Total for two years	2607	219

% Pos. cases—8.4 Syphilis.

Guelph Reformatory

No. of Admissions.	
No. of Wassermanns, April, 1921—December, 1921	927
No. of Positive Wassermanns	99
% of Positive Wassermanns	10.6%
No. of G. C. cases	77
% of G. C. cases	8.3%

Mercer Reformatory

New Admissions or	
No. of Wassermanns, January 1921—January, 1922	173
No. of Positive Wassermanns	56+9.65
% of Positive Wassermanns	38%
No. cases of Gonorrhoea	45
% cases of Gonorrhoea	26%
No. cases Double Infections	25
% cases Double Infections	14%
No. of Wassermanns Nov. 1st, 1919—April 1st, 1920	116
No. of Positive Wassermanns	28
% of Positive Wassermanns	24%

Fort William Industrial Farm

All inmates of this institution were examined and all cases of venereal diseases were placed under treatment as soon as discovered. The treatment was supervised and carried out weekly by the director of the Fort William Provincial Laboratory. When the clinic at Fort William was established, treatment was carried out at the clinic, the patients reporting there under guard.

(d) Manufacture and Distribution of Phenarsenamine—

The Board, through the main laboratory at Toronto, has been busily engaged in manufacturing Phenarsenamine (similar to old salvarsan) for use by medical officers of health, clinics and public institutions in this and other provinces in Canada. The Board, however, is still unable, owing to the terms of the Dominion license, to supply this product to medical men for the treatment of their own private patients and has been greatly handicapped by this fact. However, a great deal of the preparation has been used by clinics, institutions and local medical officers of health in the treatment of patients who have no means and are unable to pay either for a physician or the drug.

During the past year distribution of Phenarsenamine was made as follows:—

	To Institutions in Ontario:	
	Ampoules	1,196
	Grammes	630.9
	To Clinics, Medical Officers of Health, etc., in Ontario:	
	Ampoules	10,880
	Grammes	5,800.1
Total	Ampoules	12,076
	Grammes	6,441
	To British Columbia:	
	Ampoules	1,750
	Grammes	630
	To Manitoba:	
	Ampoules	144
	Grammes	43.2

Samples of the preparation have been sent to the other Provinces and it is expected that the amount distributed to points outside the Province will next year be materially increased.

I cannot let the occasion pass without saying how much the co-operation of the Division of Laboratories has meant in the efficiency of the Division of Venereal Diseases. There has been the closest co-operation at all time, especially in connection with the manufacture, testing (by animal, chemical and human tests), distribution and administration of Phenarsenamine. The remarkably even standard of the drug, the ease of administration, the absence of reactions and its undoubted therapeutic effect have all been of the greatest importance in popularizing its use.

The Division, in co-operation with the Main Laboratory, has carried on a great amount of research work in connection with the questions of toxicity, therapeutic tests, and so on. It is intended to extend this work during the coming year by increasing the scope of these researches.

3. *Education*

(a) General—

The scheme for the education of the public has been carried on with increased vigour during the past year. A large amount of literature on venereal disease was distributed through voluntary organizations local medical officers of health and through clinics as well as supplied to individuals who wrote or personally applied for it. The following pamphlets are now available:—

V. D. No. 1—General Facts on Venereal Diseases.
V. D. No. 2—Facts for Boys and Young Men.

V. D. No. 5—Facts for Girls and Young Women.
V. D. No. 9—Short Description of Venereal Disease.
V. D. No. 10—Instructions to those having Venereal Disease.

Medical men have been circularized and have all received four excellent pamphlets on the technical side of the diagnosis and treatment of venereal disease. These pamphlets, which were printed by the Dominion Department of Health and circulated by the Provincial Board, have received the commendation of many medical men.

Dr. J. H. Stokes' booklet has retained its position as one of the best monographs in print and many additional copies of this excellent little book have been distributed to physicians and medical students.

The members of the Division have spoken at many public meetings, medical meetings, meetings of women's organizations, etc., during the past year and in this way excellent publicity has been obtained. The social service nurse alone spoke at over twenty-five meetings during the year.

The film for women, "How Life Begins" has been shown to over 1,000 women and is becoming very popular as a means of assisting in sex education.

The technical film, "The Modern Diagnosis and Treatment of Venereal Disease" has been shown to over 500 physicians during the year.

During the National Exhibition in September in Toronto a very interesting exhibit on venereal disease was held as part of the exhibit of the Provincial Board of Health. An attractoscope with slides, posters and pamphlets were used and excited very favourable comment. Many samples of literature were given away and many questions answered. A special tent was erected where a physician was present at certain hours to advise any men who wished information on any medical aspect of the venereal diseases. This was astonishingly well patronized and will undoubtedly be a very important feature of the next exhibit.

In connection with the educational programme, the very closest co-operation was maintained with the Canadian National Council for Combating Venereal Diseases. This organization during the past year has, under the energetic management of the indefatigable secretary, Dr. Gordon Bates, and the executive, done an enormous amount of useful work along educational lines. The course on social hygiene arranged in conjunction with the Univeristy of Toronto was a triumph in itself. The addition of the noted English speaker, Mrs. Pankhurst, to the staff of the council has been the means of arousing the greatest interest in social hygiene among the women of Ontario. Mrs. Pankhurst will undoubtedly be a very powerful asset to the council in its work.

During the past year a refresher course of four days was held during the week preceding Christmas at the Toronto General Hospital under the auspices of the University of Toronto. The course was very well attended and the instruction and the demonstrations given were of the very best.

During the meeting of the Ontario Health Officers at their annual conventions a demonstration of the administration of Salvarsan both by the gravity and syringe methods, as well as the administration of mercury salicylate intramuscularly was given; the demonstration was a huge success; over one hundred physicians were present and observed, under ideal conditions, the treatment of several patients.

(b) *Social Service Nurse*—

This nurse has been of the greatest possible help in the campaign. Her investigations in the Mercer Reformatory alone have been invaluable. She has been a great help in training the social service nurses in the various clinics; as the type of work to be done requires the greatest possible tact and sympathy, this part of her work is by no means the least important. She has been working with the Ontario hospitals in following up the contacts of cases of syphilis in these institutions. Under the Director she has been of help in arranging for the examination of the contacts of children reported as dying of congenital syphilis. As a rule this examination is carried out through the private physician in charge of the case and the work accomplished has been very valuable both from the standpoint of treatment and education. Some of the work performed by the nurse may be summarized as follows:—

Clinics attended (day)	—52	Visits to Institutions (other than Mercer)	12
Clinics attended (night)	—10	Visits to Women's Court	7
Meetings attended	—60	V. D. Investigations	—8
Lectures attended	—12	Instructing V. D. clinic nurses	—18 days
Follow up visits	—10	Film showings 12 1,000	people
		Mercer Reformatory	32 days

The work done by the Division during the past year has greatly increased. Unfortunately for a great part of the year one of the physicians has been handicapped through illness. This has thrown much extra work on the other members but the extra burden has been cheerfully accepted. I feel that the various members must be congratulated on the excellent spirit and cheerfulness displayed. Sometimes the work has been very heavy but the physicians, the social service nurse and the stenographer have worked faithfully and given their best at all times.

I can only conclude by saying that the Division hopes to do more efficient work during the coming year as it is realized that there is much to do and that the road to success is far from smooth.

ANNUAL REPORT, DIVISION OF PUBLIC HEALTH EDUCATION.

I have the honour to submit the following report of the Division of Public Health Education, for the year ending December 31st, 1921.

This Division has endeavoured to get in touch with more and more people throughout the province and provide them with literature and advice on matters of personal and community health, and the progress of public health in general. That this propaganda is taking effect is much in evidence by the enquiries coming in from all parts of the province, asking for advice and literature on various health topics.

One of the important methods for the spread of health propaganda has proved to be the weekly newspaper, and a health article now appears in 220 newspapers throughout the province. From far and near, from British Columbia, Alberta and Saskatchewan, from Quebec and from points all over Ontario, questions come in from readers of these weekly papers asking for information on health topics.

A series of pamphlets have been prepared for general distribution, including "Health Promotion and Disease Prevention," "Breast Feeding of Infants." "The Need for a Public Health Nurse," and "The Health Almanac." This almanac has proved especially attractive, nearly 20,000 copies having been distributed all over the province.

In the matter of diffusing Public Health information, valuable assistance and co-operation have been received from the Women's Institutes throughout the province. These societies, scattered far and wide, are always ready and anxious to help in the great work of improving the health of the people in their respective districts.

That this health information is very necessary in rural communities is indicated to some extent at least by the conditions in the rural schools in many parts of the province. Approximately 800 Medical Officers of Health send in their reports yearly on the sanitary conditions of schools, and in many cases the conditions are deplorable. The insanitary state of the closets, the absence of washing facilities for the children, the lack of care in providing pure drinking water, etc., are matters of great concern which need to be given more attention. In some districts, however, the public health spirit seems to have been instilled into the minds of the people, for the reports received as to the condition of the schools are very encouraging and show that the importance of hygienic and sanitary conditions is being recognized.

Public Health Education has received an additional stimulus through the lecture courses inaugurated by the Ontario Medical Association. Arrangements have been made for speakers from the various divisions of the Provincial Board of Health to give lectures on Public Health topics before local medical societies throughout the province, thus bringing authentic information as to the latest activities of the Provincial Board directly to rural practitioners. Several of these Public Health lectures have already been given, and many more are planned for the coming year.

Propaganda work on behalf of the appointment of a Public Health nurse has been undertaken on occasions when intensive publicity is required. By the aid of posters, and newspaper announcements, the itinerary of the Child Welfare Special which toured a large section of the province last summer, was kept

before the people of the places visited. In St. Mary's, Port Colborne and many other places, public meetings were held, setting forth the value of a Public Health nurse to the community.

Much publicity in advance was given the combined meetings of the Canadian Public Health Association, the Ontario Health Officers' Association, the Canadian Association for the Prevention of Tuberculosis, and the Canadian Council for Combating Venereal Diseases, held in Toronto in May last. A very elaborate programme was prepared, and as a result this Public Health Convention was one of the most successful yet held.

Several features entirely new were embodied in the Provincial Board of Health's exhibit at the Canadian National Exhibition this past year. For weeks before the Exhibition opened in Toronto, notices were sent periodically to various city and provincial papers describing the exhibit. A large stage, which it is intended, will serve more or less as a permanent structure for Public Health entertainments and demonstrations, was erected, and a programme provided which held the attention of the crowds every afternoon and evening. Chief among the entertainers was "Happy," the health clown, a merry jester who kept the youngsters and many grown-ups interested with his homely logic and good advice on health topics. Another graphic display of Public Health activity was provided by means of a huge electrical device consisting of two ladders, one leading to good health and happiness, the other to ill-health and misery. Each step along the path of childhood, youth, and adult life was illuminated by an electric sign, setting forth either a warning or an encouraging word to the wayfarer. The novelty of this exhibit attracted the attention of the thousands who passed it day by day, and the graphic way in which the good health propaganda was offered, appealed to everybody. It is hoped that this display method of Public Health propaganda will receive wider publicity.

The milk exhibit, showing the method of pasteurizing milk and general sanitary conditions in the handling of milk, was an attractive feature, as were all the sections dealing with Venereal Diseases, Vital Statistics and Sanitary Engineering.

Considerable delay has been occasioned by the printers' strike this past year in the publication of the annual report for 1920. The material has been in the printers' hands since last spring, but unfortunately little progress has been made in spite of continuous inquiries.

Owing to the great need for continuous personal propaganda in Public Health, I would recommend the appointment of one or more Public Health teachers who could carry on a continuous campaign of lectures, health talks and publicity all over the province. Such a teacher or teachers could materially assist in preparing the way for a community nurse demonstration, and otherwise be of great assistance in the work of Public Health Education.

REPORT OF THE PROVINCIAL SANITARY ENGINEER

F. A. DALLYN, C.E. (TOR.)
PROVINCIAL SANITARY ENGINEER.

Gentlemen:—

I have the honour to submit the following report upon the work of the Sanitary Engineering Division for the year 1921. The following applications were received and approved:—

	Certificates.	
Water Works (extensions)	138	$3,707,402 67
" " (new)	10	551,738 31
Water Purification	2	240,000 00
	150	$4,499,140 98
Sewer Extensions	217	2,816,054 11
Total	367	$7,315,195 09

There appears to be an awakened interest in the extension of sewerage facilities in the smaller towns and in improvements to existing water supplies. Much of the work is the culmination of investigations carried on by the Board, and local educational campaigns, that the councils might obtain the necessary backing of an informed public opinion in carrying out needed improvements. A summary of the municipal activities, *re* sewage and water since 1915 shows an increasing annual expenditure on these works.

1915—Total applications	286	Total estimated cost	$4,679,496 74
1916— " "	190	" " "	2,010,070 42
1917— " "	186	" " "	2,880,534 72
1918— " "	146	" " "	1,590,658 39
1919— " "	256	" " "	5,508,698 53
1920— " "	262	" " "	7,859,659 50
1921— " "	367	" " "	7,315,195 09

SANITARY ENGINEERING DIVISION.

Among those features of the work of the Division during 1921 which may be considered of more than usual interest, may be mentioned:

(1) FLY CONTROL.

A special investigation was carried on in the Northern paper towns in the control of the fly nuisance. We have been able to show, and it was possible to demonstrate, in the course of six weeks during the height of what was commonly recognized as the fly season, that control could be had of both the numbers and the breeding of house flies and blue and green bottle flies.

The work divided itself into locating and controlling the breeding places and the setting of traps. At the beginning of the campaign as many as 1,000 flies per hour would be caught in a trap. As soon as control had been properly established, the number of flies caught in a trap were reduced to less than 100 per twenty-four hours. The butchers were experiencing a great deal of trouble in keeping their meat at the commencement, but during the latter part of the investigation, in the month of August, no difficulty was being experienced whatsoever and the fly campaign became extremely popular.

It was shown that the breeding ground of the blue bottle flies was in privy vaults and that the larvæ could be killed by application of chloride of lime, and that it was only necessary for this application to be repeated every five days on any fresh material.

This work is being made the subject of a special Bulletin now in the course of preparation.

(2) Sanitary Surveys.

Special investigations or sanitary surveys which were continued from the previous year, as to the use of public utilities such as water and sewerage, reveal the fact that in many municipalities a very high percentage of private wells and privy pits are allowed to continue, even though sewerage and water facilities are available, either on the same or on adjacent streets. And while this is a matter which could be corrected through the exercise of authority reposing in local Boards of Health, there appears to have been no general appreciation of the extent of these conditions until the Board showed by means of spot maps the numbers and location of premises in municipalities under investigation. Upon these spot maps were indicated houses not connected to sewers and houses not connected to water mains and, also, the location of privies and private wells.

It has been encouraging to see what use has been made locally of these maps, once the information has been compiled and presented. Very little difficulty arises in connection with new property; so that the problem revealed is a problem of promoting sanitary connections in older property and in sections building up in advance of the extension of waterworks and sewerage.

Some nineteen municipalities, having a total population of possibly 75,000, were surveyed during the season. In addition to the preparation of these spot maps, samples were collected and analyzed from each private well. A report upon this examination is included in reports to the various municipalities.

(3) Connections for Auxiliary Fire Protection Equipment.

Then, too, in addition to the routine investigations carried on by the Department for the protection of public water supplies, there has been a special investigation into conditions surrounding auxiliary fire protection equipment, resulting in the preparation and sanction of new regulations requiring double check valves on all such connections, and the separation of domestic systems from fire protection systems, where the auxiliary supply was of a specially dangerous character.

COPY OF AN ORDER-IN-COUNCIL, APPROVED BY HIS HONOUR THE LIEUTENANT-GOVERNOR, DATED THE 6th DAY OF JULY, A.D. 1921

(*The Ontario Gazette*, July 23rd, 1921.)

Upon the recommendation of the Honourable the Minister of Labour, the Committee of Council advise that the attached Regulations passed by the Provincial Board of Health under the authority of Section 8 of The Public Health Act, on May 27th, 1921, re the connection of auxiliary, railway, factory or other water supplies, including fire protection systems, or apparatus, with a municipal waterworks system the distribution of which is for public, domestic or general use, be approved by your Honour.

Certified.

C. F. BULMER.
Clerk, Executive Council.

REGULATIONS GOVERNING THE CONNECTION OF AUXILIARY, RAILWAY, FACTORY OR OTHER SUPPLIES, INCLUDING FIRE PROTECTION SYSTEMS, OR APPARATUS, WITH A MUNICIPAL WATER-WORKS SYSTEM, THE DISTRIBUTION OF WHICH IS FOR PUBLIC, DOMESTIC OR GENERAL USE.

1. No fire protection system, railway, industry, factory, or other water supply shall be connected with a municipal waterworks system, except as herein provided, and every connection not conforming with these regulations, or not maintained as herein provided, is declared a nuisance, and a menace to the public health, subject to penalties as set forth in Section 10 of these regulations.

2. Every private pipe system for the conveyance of water for manufacturing or domestic purposes shall be entirely independent of private pipe systems installed for sprinkler risk, and fire protection services. Every main used for the conveyance of water, other than the domestic and sanitary supply, shall be clearly marked by a distinctive color of paint or otherwise. Nothing in this section shall be read as to exclude any service connection between the municipal main and check valves, as provided in Section 4.

3. No system circulating water for cooling and other industrial purposes, such as the operation of elevators, etc., shall have connection or return to the underground or any other storage tank used for fire protection, and all such tanks shall be protected against the entrance of drainage water, or other deleterious matter or things.

4. A connection may be maintained between a fire protection system and a municipal water supply, and every such connection shall be protected with dual check valves of approved type, with the proviso that this section applies only to:

(a) Where overhead tanks are used as an auxiliary source for the supply of water for a sprinkler risk fire protection system.

(b) Where storage tanks are used solely for the supply of water for fire protection purposes, provided that on the discharge side of any pump used in connection with such storage tank, and for fire protection there is placed a gate valve, which shall, except in the case of a fire, be closed and sealed with light wire, and between the said pump and sealed valve a connection with a gate valve arranged to discharge to waste for testing purposes.

5. No connection, other than one used for fire protection, shall be maintained between any auxiliary railway or factory supply, or any storage tank and a municipal system. The supply of water for any such system may be obtained through an open discharge to a tank, and every such discharge shall be located above the highest water level.

6. No direct connection shall be maintained between high pressure mains for fire protection and a municipal domestic supply, save as provided in Section 5 to maintain water in a high pressure system.

7. Wherever an auxiliary fire protection exists, other than the connection provided by Section 4, the owner of the property so protected or served shall, within six months from the publication of these regulations in *The Ontario Gazette*, install double check valves for the purpose of protecting the municipality against the introduction of water from any such system.

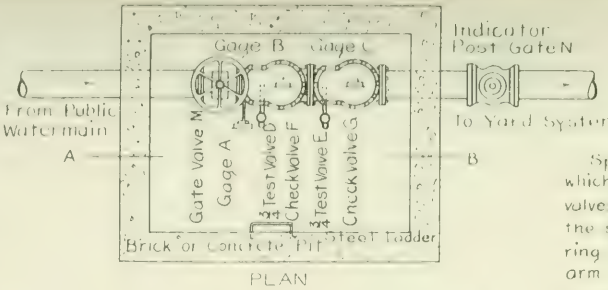
8. The check valves, as provided for, and required to be installed by these regulations, shall be modern, clearway swing type check valves, with wide clearance, and of a type similar to that generally known as the "Factory Mutual," and subject to the approval of the Provincial Board. Each installation shall be provided with gate valves and the necessary devices for testing the water-tightness of the check valves, and every such installation shall be subject to inspection, and shall be maintained in proper working condition and state of repair. The valves shall be located in an accessible position for inspection.

9. Subject to the approval of the Provincial Board of Health, in writing, a connection may be maintained between a private supply and a municipal supply system where the Board, upon examination, certifies that it is of the opinion that the source of supply is of satisfactory quality, or satisfactorily protected for domestic consumption.

NORMAL CONDITION OF VALVES

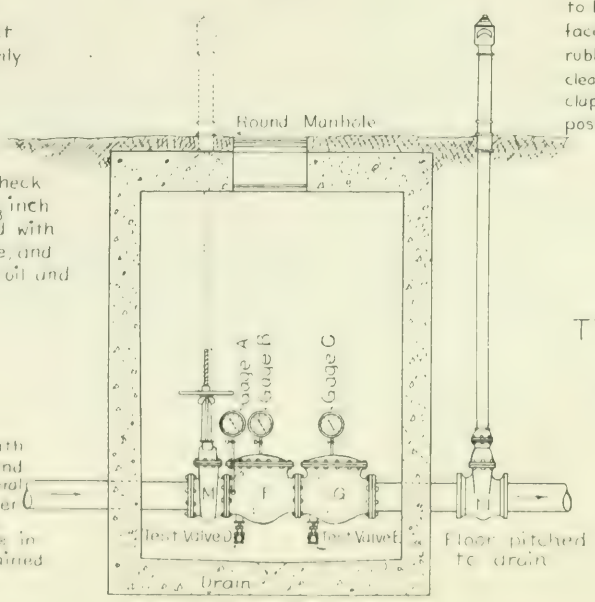
OPEN
Gates M-N

SHUT
Test Valves D-E



PLAN

About once a year inspect check valves and thoroughly clean whole interior.



SECTION THROUGH A B

To facilitate removing check valve bonnets pack with ⅛ inch sheet rubber packing faced with machine oil and graphite, and grease bolts with heavy oil and graphite.

Size of Pit etc. will vary with different sizes of valves and local conditions but in general the Pit should be not smaller than about 4 6 x 5 6 deep. Pit to be water tight where in wet soil and properly drained where in dry soil.

F M VALVES

Specifications under which these special check valves are made require the seat ring, disc holding ring and screws disc stud, arm hinge pin and bushings to be of bronze disc to be faced with medium hard rubber and liberal clearances left around clapper and arm in all positions

METHOD OF TESTING

Open test valve D to blow out any sediment that may have accumulated in test valve or connecting pipe, and then close.

Close gate M and open test valve D. If pressure falls at gage A & pressure at gage B holds after decreasing slightly check F is tight.

While test valve D remains open and pressure at gage A stands at zero open test valve E If pressure at gage B falls to zero and flow from test valve E ceases check G is tight.

CAUTION- Immediately at close of test see that gates M and N are open It is important that the protection be promptly restored

PLAN SHOWING TYPICAL ARRANGEMENT OF CHECK VALVES BETWEEN A MUNICIPAL WATERMAIN AND ANY SERVICE THROUGH WHICH MAY BE INTRODUCED AN AUXILIARY SUPPLY

See Regulations of the Ontario Provincial Board of Health July 6 1921

10. Subject to penalty as provided in Section 110, SS. 2, of the Public Health Act, every auxiliary connection for fire protection excepting as provided for in Section 9, shall, not withstanding Section 7 of these regulations, comply with Section 4 within a period of two years from the publication of these regulations in the Ontario Gazette and all connections then existing shall be deemed a nuisance and a menace to the Public Health within the meaning of Section 73 of the Public Health Act.

(4) Research.

In the field of research, practical experiments have been carried on to determine whether a process cannot be evolved to take care of the sludge rising in the activated sludge process, from the smaller municipal plants. The results of this work are extremely encouraging and it may be cited that one municipality, treating a million and a quarter gallons per day by this process, and located in a built-up section, is experiencing no nuisance whatever from the disposal of the sludge since the inauguration of the plant in the month of May.

Other experiments are set out more fully in Bulletin No. 8.

(5) Sanitary Control of Milk Supplies.

The water supplies now having been protected throughout the Province to a sufficient extent as to prevent their being a contributing factor in the distribution of typhoid fever, attention is now being directed towards municipal milk supplies, and data has been collected with the idea of suggesting legislation to provide more centralized control of milk producers and vendors.

(6) Assistance re Sanitation of Government Institutions.

In addition to the other work of the Department, a considerable amount of consulting assistance has been given to the Public Works Department in connection with the protection of water supplies, and the design of sewage disposal plants of public institutions. In this connection it might be proper to cite the fact that the activated sludge plants have been uniformally successful for this purpose, and have resulted in a considerable decrease in the numbers of complaints and in the cost of supervision.

Certificates issued re Sewer Extensions for the year 1921.

Municipality.	No. of certificates.	Extensions.	Municipality.	No. of certificates.	Extensions.
Arnprior	2	$ 733 41	Guelph	1	54,231 33
Almonte	1	125,000 00	Hamilton	5	567,886 06
Barrie	5	6,815 00	Kingston	5	13,923 36
Belleville	4	16,227 77	Kingsville	4	45,138 63
Brantford	2	54,726 00	Kitchener	5	113,649 16
Brockville	1	42,215 50	Leamington	2	38,971 34
Burlington	2	2,256 91	Lindsay	9	17,828 05
Campbellford	1	4,550 00	London	32	187,326 96
Chatham	2	4,802 48	Midland	1	5,775 00
Cornwall	3	3,942 65	North Bay	1	15,348 00
Twp. of Cornwall	1	4,700 00	Niagara Falls	6	46,881 04
Dundas	1	45,000 00	Newmarket	2	44,000 00
Dunnville	3	34,130 30	New Toronto	1	13,878 00
Eastview	2	4,140 00	Ottawa	17	154,112 28
Elmira	3	24,059 72	Oshawa	3	89,917 80
Ford City	3	137,260 29	Renfrew	1	554 40
Fort William	2	3,268 85	St. Thomas	1	1,420 40
Galt	10	51,065 85	St. Catharines	2	25,025 78
Goderich	9	15,741 80	Sandwich	5	25,405 22

Municipality	No. of certificates	Extensions	Municipality	No. of certificates	Extensions
Sault Ste. Marie	4	123,160 76	Waterloo	1	5,579 18
Sarnia	6	45,885 76	Welland	3	37,072 49
Simcoe	2	54,322 26	Weston	2	5,684 00
Smith's Falls	6	25,220 86	Whitby	1	256 36
Stratford	4	7,191 54	Wingham	1	8,400 00
Sturgeon Falls	1	2,000 00	Woodstock	5	4,213 70
Sudbury	2	30,759 45	Windsor	9	149,820 51
Timmins	2	20,589 10			
Toronto	8	253,988 80		217	$2,816,054 11

SUMMARY

Extensions	$2,816,054 11

CERTIFICATES ISSUED RE WATER MAINS, PURIFICATION, ETC. FOR THE YEAR 1921.

Municipality	No. of Certificates	Extensions	New Sources of Supply and Purification	New
Alexandria	1	$ 800 00		
Almonte	1	175,000 00		
Anderdon Twp.	1	7,398 00		
Barrie	1	10,000 00		
Beeton	1	6,000 00		
Brantford	1	174,000 00		
Brockville	2	39,123 68		
Burlington	1	3,600 00		
Chatham	1	37,000 00		
Clinton	1	6,000 00		
Courtwright	1			$21,500 00
Dundas	2	50,000 00		
Dunnville	3	24,000 00		
Eastview	2	141,659 00		
Elmira	1	3,000 00		
Etobicoke	4	180,036 29		
Ford City	1	10,742 02		
Fort Frances	3	27,982 15		
Galt	3	26,910 64		
Georgetown	1			60,000 00
Goderich	1		$ 55,000 00	
Grantham	1	2,285 21		
Grimsby	2	8,495 93		
Guelph	2	6,505 00		105,000 00
Hamilton	9	165,715 56		
Hanover	1			85,000 00
Hespeler	1			6,462 28
Kingsville	1			19,300 00
Kingston	2			4,476 03
Kitchener	4	212,084 62	185,000 00	
Lindsay	2	10,152 68		
Listowel	1	8,717 06		
Markdale	1	5,000 00		
Markham	1	6,000 00		
Massey	1	1,445 00		
Midland	1	35,000 00		
Mitchell	1	1,635 55		

Municipality	certificates	Extension	New source of supply and Purification	New
Napanee	2	38,500 00		
New Toronto	3	3,616 00		$ 35,000 00
Niagara Falls	2	30,272 36		
Oshawa	6	24,833 05		
Parry Sound	1	15,000 00		
Pembroke	2	11,756 65		
Perth	1	24,102 83		
Peterborough	1	15,428 28		
Petrolia	1	42,000 00		
Port Colbourne	2	65,696 48		
Port Credit	1			110,000 00
Port Dalhousie	1	25,000 00		
Port Hope	1	7,600 00		
Port Stanley	1	969 65		
Richmond Hill	1	96,000 00		
Riverside	3	19,429 92		
St. Catharines	2	31,082 57		
Sandwich	4	17,157 62		
Sandwich East	3	15,916 16		
Sarnia	1	13,000 00		
Stratford	2	67,153 50		
Sturgeon Falls	3	5,700 00		75,000 00
Sudbury	3	22,474 42		
Tilbury	1			30,000 00
Timmins	2	33,307 12		
Toronto	7	941,788 47		
Tottenham	3	16,000 00		
Uxbridge	1	50,000 00		
Welland	2	19,734 70		
Weston	4	24,650 00		
Windsor	1	150,000 00		
Wingham	1	6,500 00		
York	17	671,444 50		
Total	150	$3,707,402 67	$240,000 00	$551,738 31

SUMMARY

Extensions	$3,707,402 67
Purification	240,000 00
New	551,738 31
Total	$4,499,140 98

Division of Sanitary Engineering

BULLETIN NO. 8

Further Experiments on the Fertilizing Value of Activated Sludge.

By H. D. BROWN, M.A.

Report upon the Relation of Iron to Activated Sludge

By G. H. W. LUCAS, B.A.

Report upon the Relation Between Gas Evolved and the Digestion of Sewage in Activated Sludge

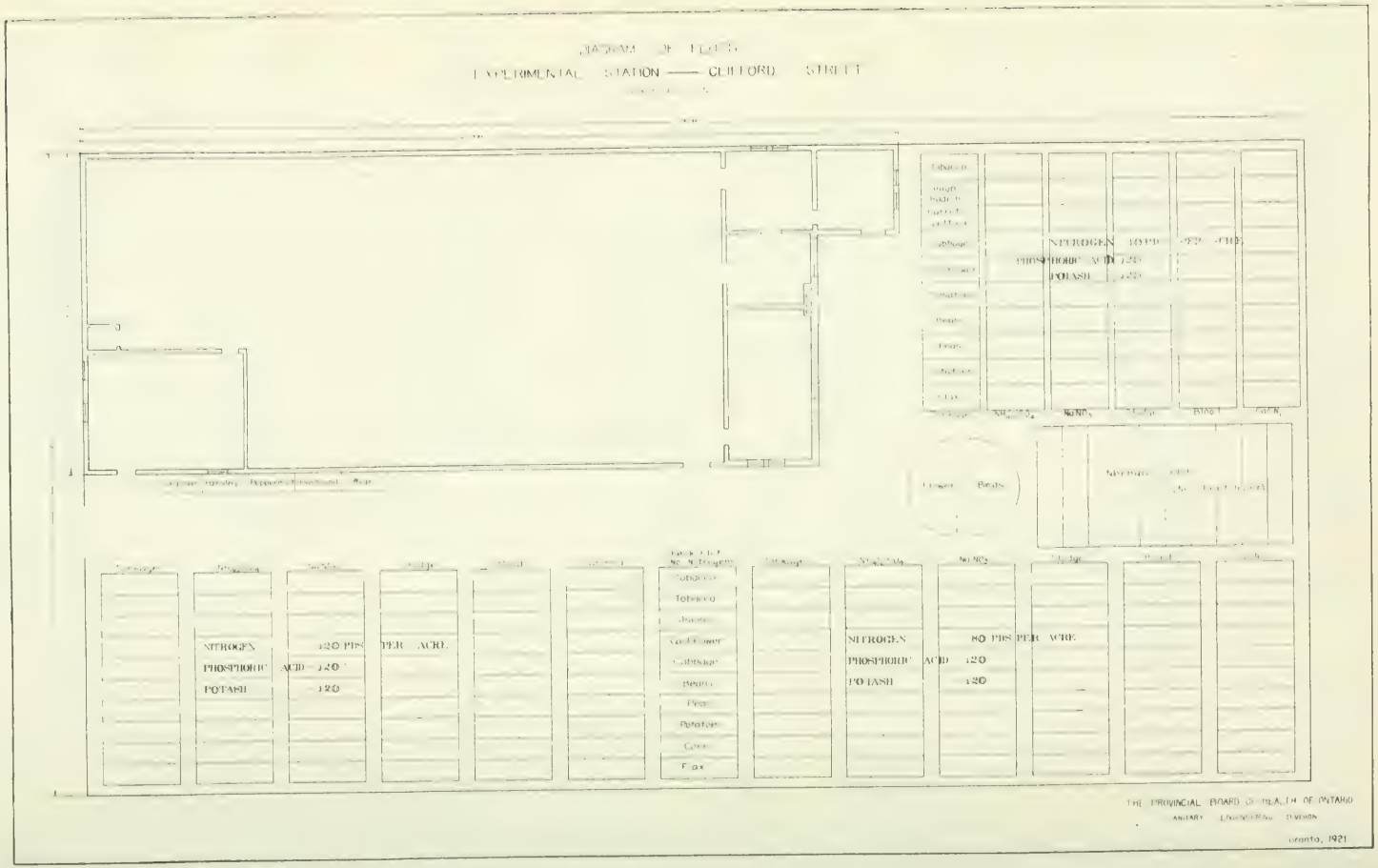
By G. H. W. LUCAS, B.A.

Studies in Fly Control

By A. E. BERRY, M.A.Sc. and C. H. McLEOD, B.A.

Investigations in the Sanitation of Swimming Pools

By A. V. De LAPORTE, B.A.Sc.


EXPERIMENTAL STATION — CLIFFORD STREET
NITROGEN
PHOSPHORIC ACID
POTASH
Tobacco
Beans
Peas
Potatoes
Corn
Oats
NITROGEN 120 PDS PER ACRE.
PHOSPHORIC ACID 120
POTASH 120
NITROGEN 80 PDS PER ACRE.
PHOSPHORIC ACID 120
POTASH 120
THE PROVINCIAL BOARD OF HEALTH OF ONTARIO
SANITARY ENGINEERING DIVISION
Toronto, 1921

FURTHER EXPERIMENTS ON THE FERTILIZING VALUE OF ACTIVATED SLUDGE.

Results of Experiments Carried Out during 1921, in Continuance of those Started in 1920 at the Provincial Board of Health Experimental Station, Clifford Street, Toronto.

By H. D. Brown, M.A.

Object.

The field experiments undertaken in 1920 were duplicated in 1921 under conditions as similar as possible. The plots were laid out on the same areas and the nitrogenous fertilizers applied in the same quantities. The superphosphates and potash applications were omitted, for it was considered that the amounts applied in 1920 were sufficient to meet the needs of the crop during the 1921 season.

Soil.

In regard to the soil, it was unfortunate that excavations and concrete work had to be done at the Experimental Station during the winter of 1920-21. This necessitated the dumping of large quantities of clay and cement material on several of the beds. Heavy trucks churned up the soil considerably in the N. 120 section. The ground was cleaned up as well as possible and all the plots were spaded over early in May.

Fertilizers.

The plots were again approximately 1/100 acre in size and received nitrogenous fertilizers as follows:—

Table I

Fertilizer.	% of Nitrogen	% of Water	N 40 Series	N 80 Series	N 120 Series	Date applied Series
Cyanamid	20	3	2 lbs.	4 lbs.	6 lbs.	May 5th
Dried Blood	10	10	4 "	8 "	12 "	May 18th
Dried Sludge	4½	10	9 "	18 "	27 "	" "
Sod. Nitrate	15	3	3 "	6 "	9 "	" "
Amm. Sulphate	20	3	2 "	4 "	6 "	" "
Tankage	5½	10	7½ "	15 "	22 "	" "

The cyanamid was applied two weeks previous to planting, as had not been possible in 1920.

Planting.

As shown in Table II, the plants were set out much earlier than in 1920, with the exception of corn. Corn was substituted for hemp, after two unsuccessful attempts to get a growth. The numerous sparrows in the vicinity accounted for practically every seed.

TABLE II

Plant	*Variety*	*Area*	*Date Sown*	*Date set out.*
Tomatoes	Earliana and Bonny Best	N 40-2 rows	.....	May 31
		N 80 & 120-1 row	.....	.....
Flax	Simmers seed	4' wide	May 20	.....
Corn	Kendal	2 rows	June 19	.....
Potatoes	Cobblers	2 "	May 20	.....
Peas	Little Marvel	2 "	May 20	.....
Beans	Dwarf Butter Wax	2 "	May 20	Replacing June 9
Cabbage	Early Jersey, Wakefield	1 row	March 23	May 23
Cauliflower	Early Snowball	1 "	March 23	May 23
Onions	Adnac	1 "	May 19	.....
Tobacco	White Burley	2 rows	March 23	May 25

RECORDS.

The weekly grading of plots in each series was made, based on the appearance of the plants; their size, health, freedom from disease, color and general condition. The relative grading of those on the sludge plots is given in graphs. When mature or in a marketable condition the crop was harvested and weighings made. Table III gives the early maturity, based on the first marketable crops. Table IV is a summary of weighings showing also the percentage relation of sludge plot produce to the average of the plot series

Hoeing, watering and spraying was carried on as seemed necessary throughout the season, and records of all noteworthy features made. Photographs 1-3, taken July 15th, show to some extent, the general arrangement and growth. In the case of tobacco a comparison is possible.

FLAX.

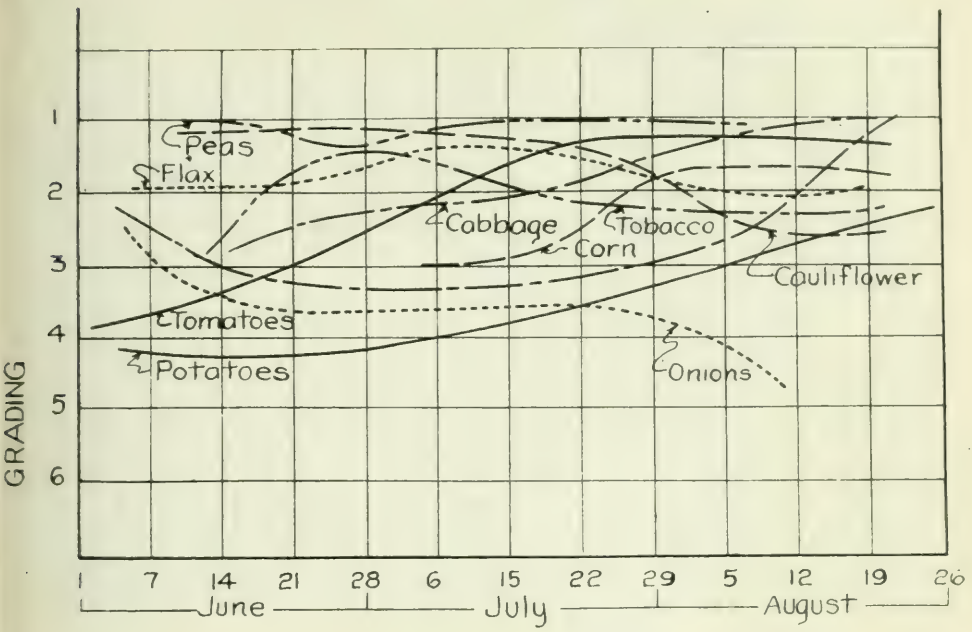
The flax was planted May 20th and was showing uniformly by May 27th, with slight advantage on the sludge, blood and tankage plots. The crop was in flower July 3rd, but was short and variable. All fertilized plots were superior to the check and normal plots. Later in the season, the N 40 plots, with nitrate and sulphate fertilizer, failed to maintain good growth. In general appearance the sludge plots maintained second place in their series throughout most of the season. The crop was light, with short stem. The weights from the sludge plots averaged up better than those from any other plots. N 40 gave 23%, N 80, 19% and N 120 1¼% above the average for that section, while the check and normal plot yields were 16% and 8% below the average. For flax, sludge continued to give results as good or better than any fertilizer used, both in appearance of plant and total yield obtained.

HEMP.

As another fibre producing plant, hemp was considered worth introducing. Strips four feet wide were seeded May 20th, but by June 10th practically no plants were visible; so the plots were resown that day. Flocks of sparrows were noticed on the plots, and again scarcely any plants appeared. As nothing practicable could be done, the plot space was utilized for corn.

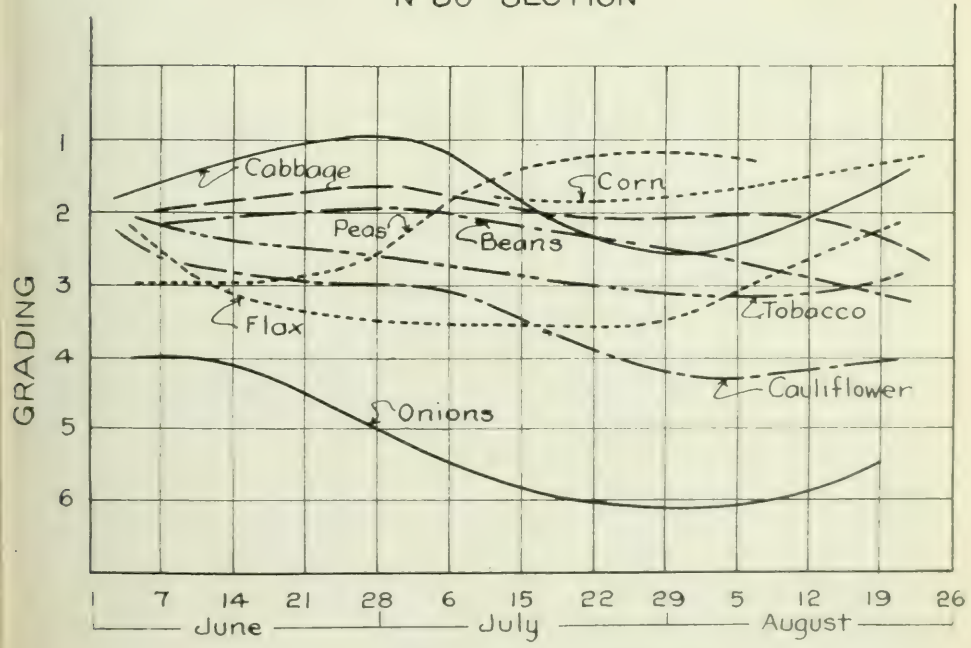
GRADING ON SLUDGE PLOTS

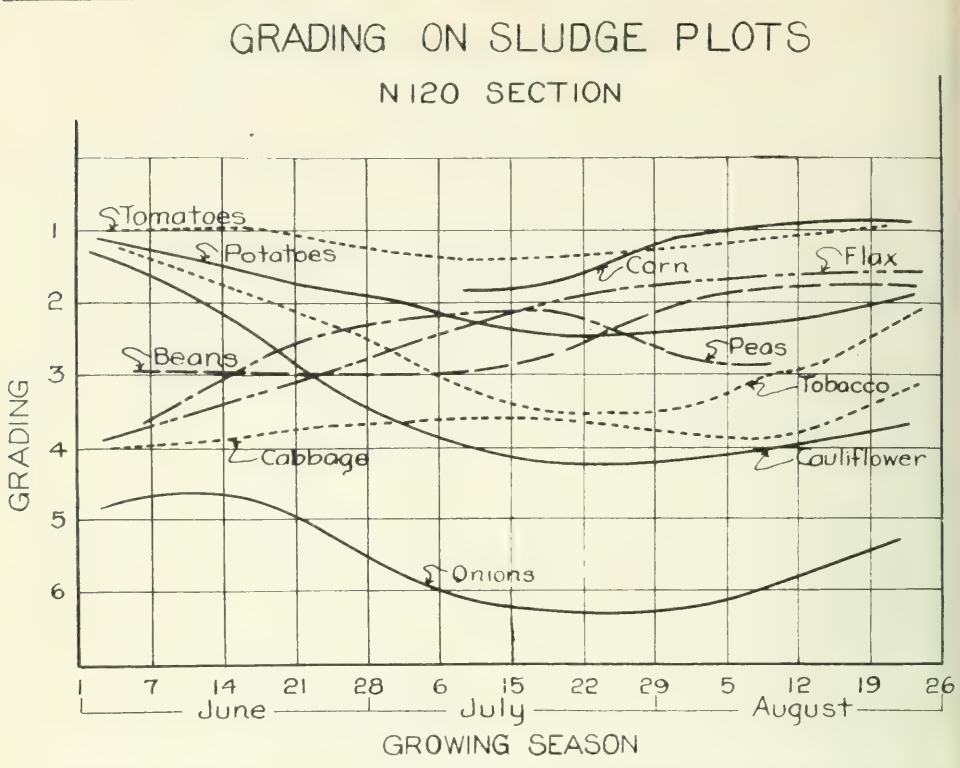
N 40 SECTION



GRADING ON SLUDGE PLOTS

N 80 SECTION





NOTE.—The data from which the above graphs on "grading on sludge plots," were prepared is omitted owing to it's cumbersome nature and to the fact that the gradings are made on personal observation and judgment alone. Similar data was obtained for all other plots, but it is of value only as indicating the general trend of growth on each plot.

N 20 Sec

N. 120 Section
Cauliflower
Cabbage
Beans
Peas
Potatoes
corn
July 15th 1921.

EARLY MATURITY—

	N40 Section						N80 Section			
	$CaCN_2$	Blood	Sludge	Nitrate	Sulphate	Tankage	$CaCN_2$	Blood	Sludge	Nitrate
Flax	6	4	2	5	3	1	5	4	2	3
Potatoes....Grading of Tops..	3	1	2	4	6	5	1	2	3	5
Peas	1	5	2	6	3	4	4	5	2	6
Beans	2	6	1	5	3	4	6	4	1	2
Tomatoes	4	5	2	1	3	6	5	3	1	6
Cabbage	5	6	2	1	3	4	3	1	2	4
Cauliflower	5	6	1	2	4	3	5	6	4	2
Onions		no maturity.								
Tobacco.....Grading	6	4	2	1	3	5	1	2	3	4
Corn.....Grading	4	1	2	3	6	5	3	1	2	4

MARKETABLE PRODUCE—

		N40 Section						N80 Section			
		$CaCN_2$	Blood	Sludge	Nitrate	Sulphate	Tankage	$CaCN_2$	Blood	Sludge	Nitrate
Flax	Wt. in oz.	80	78	85	51	46	75	62	88	100	86
	Rel. to Average			+23%						+19%	
Corn	No. Cobs.	10	15	15	10	3	6	21	21	15	22
	Av. Wt.Cobs, Oz.	7	5.5	6.5	7	5.5	3	7	6	7	5
	Wt. Stalks., lbs.	14.5	18.5	15	18.5	13	7	28	28.5	29.5	23.5
	Rel. to Average			+7%						+22%	
Potatoes	Weight	86	62	58	48	51	128	151	152	150	64
	Rel. to Average			+19%						+13%	
Peas	Wt. in oz.	27.5	19	20	12	14.5	10.5	36	31.5	32	19
	Rel. to Average			+14%						+18%	
Beans	Wt. in oz.	20	4.5	14	10.5	10.5	18	20.5	27	37	39
	Rel. to Average			—4%						+24%	
Tomatoes	Wt. in lbs.	35.7	42	41	33.5	26	27.5	27.5	41	39	32.2
	lbs. per Vine.	4.5	5.2	5.1	4.2	3.2	3.5	5.5	8	8	6.5
	Rel. to Average			+21%						+20%	
Cabbage	No. Mature	4	3	3	8	10	3	9	6	4	7
	Wt. in lbs.	12	7	14.5	26	34	3	34.2	23.7	17.2	22.5
	Wt. per Plant.	3	2.3	4.7	3.2	3.4	1	3.7	4	4.2	3.2
	Rel. to Average			+52%						+13%	
Cauliflower	No. Plants.	1	1	3	3	1	2	1	3	1	4
	Wt. in oz.	6	6	3.8	2.8	9	1.9	6	2.2	9	7.1
	Average Wt.	6	6	18	13	9	13	6	11	9	28
Tobacco	Wt. Tops., oz.	48	86	90	86	70	60	136	120	128	80
	Wt. leaf., oz.	192	276	316	334	233	208	456	490	476	416
	Total Wt., oz.	240	362	406	420	303	268	592	610	604	496
	Rel. to Average			+24%						+20%	

TABLE III

N120 Section

Sulphate	Tankage	$CaCN_2$	Blood	Sludge	Nitrate	Sulphate	Tankage	Normal	Check
6	1	2	4	1	5	3			
4	6	1	4	2	3	5	6		
1	3	2	1	3	6	5	4		
3	5	6	5	1	3	2	4		
4	2	5	3	1	4	6	2		
6	5	6	3	1	2	4	5		
1	3	1	6	2	4	5	3		
5	6	6	2	1	4	5	3		
5	6	1	3	2	4	5	6		

TABLE IV

N120 Section

Sulphate	Tankage	$CaCN_2$	Blood	Sludge	Nitrate	Sulphate	Tankage	Normal	Check
91	80	73	72	74 1.2%	65	81		63 —16%	69 —8%
18 5.5 21.5	24 5.5 24	24 6.5 26	21 5.5 23.5	18 6.5 26 0	21 6 26	20 6 29	8 6 27	29 5.7 20 —5%	26 5.5 18 —15%
96	180	128	170	164 +45%	94	86	40	108 0	
24.5	11.5	22.5	29	23.5 +18%	13.5	15.5	11	23 +15%	23.5 +17%
40.5	15	17.5	23	19 0	14.5	30.5	14	13 —30%	18.5 +3%
26.7 5.2	29 6	33 6.5	30 6	37 7.5 22%	34.2 6.7	23.5 4.7	23.7 4.7	25.2 5 —20%	26.5 5.2 —18%
8 28.5 3.5	8 32.5 4	10 39.5 4	10 31.5 3	9 36.5 4 +14%	8 25.2 3.2	9 27.7 3	7 26 3.7	9 27 3 —4%	6 19 3.1 0
2 2 16	4 7 28	3 5.2 26	3 4.7 20	3 3.8 18	3 2.8 13	1 3.1	1 4	4 4.1 16	5 5 16
96 362 458	92 206 298	100 363 463	86 406 492	101 360 461 +1%	58 337 395	64 337 401	146 382 528	66 194 260 —43%	60 298 358 —19%

Corn.

The corn was planted June 18th, on the hemp areas, and made a uniform showing very soon. By July 8th a grading was possible in which sludge plot corn was ranked second and dried blood plot corn, first. Tankage also gave good results. The N 80 plots gave the best growth and in yield the sludge ranked first. Cyanamid and blood yielded well, and apart from a poor soil section in N 40, 5 and 6 all were well above the check and normal plots. For corn, sludge appears to be a satisfactory fertilizer, judging from these experiments.

Potatoes.

The potatoes in the 1920 crop were very small, but were kept for seed and used in 1921. The resultant crop was again light and the potatoes very small. Soil acidity was thought a possible factor, but the soil on test showed only a very slight acidity and low lime requirement. A light application of lime up to one-half ton to the acre would be beneficial, but this factor could not have controlled the development. The top growth was good throughout the season, but the wilting occurred early. It is believed the cause of small tubers was due rather to excessive drainage and lack of subsoil depth. Ashes and loosely packed material lie close to the surface soil.

The potato plants ranked second or third throughout the season, with blood and cyanamid giving more luxuriant tops. The N 40 section was low in yield and the check plot average. The sludge plot yields compare favourably with other fertilized plots, but other than nitrogenous fertilizers play the most important part —namely, potash and lime.

Peas.

As in 1920, the peas on the sludge plots grew well from the beginning and averaged a good growth throughout the season. As was general throughout this section of the province, the season was short and all flowering was completed within one week, instead of a month in normal seasons. The weights are consequently low and the variation lessened. Sludge yielded well above the average, but the check and normal plot yields were also, probably showing, to some extent, the independence of a leguminous plant to soluble nitrate supply.

Beans.

Despite the precaution to prevent early infection of seedlings, by kerosene treatment, many plants were infected. These were replaced, but the loss was again considerable, especially in the N 40 section. The earliest marketable pods were on the sludge plots and the appearance of these plots were above the average. Nitrate and sulphate gave good results and the N 80 section was better than the N 40 or N 120 sections. Eighty lbs. per acre seems sufficient for beans on this type of soil.

Tomatoes.

Seed was sown in the greenhouse on March 23rd and the transplanting done on April 6th. These plants were in good condition early in May, when they were moved to the Experimental Station. A period of cold, windy weather

N. 80 section
D
Tobacco

N 80
N 120
E
Tobacco

N 40 Section
Tobacco
Sludge
Blood
July

Check Plot
Tobacco
G
July 15. 1921

occurred and with no adequate shelter the plants were mostly a complete loss. A uniform plant was obtained commercially and set out on May 9th. The vines on the sludge plots did well throughout the season—gave an early crop as well as the heaviest crop. Tankage ranked next in early production, but gave a lower weight of crop. The N 80 and N 120 sections were the heaviest producers, and all fertilized plots gave yields noticeably heavier than those of the check and normal plots. The quality of the tomatoes was good throughout, medium sized, but firm and juicy—a feature of abundant nitrogenous food. At the close of the season the blood and cyanamid vines had more unripened fruit than any of the others. Sludge thus seems to give stimulus to early growth and maturity as well as to total yield.

Cabbage.

The weather at planting time, though not so disastrous as in the case of tomatoes, was hard on the young cabbage and cauliflower plants. They survived, however, and matured. The variableness of yield and number of maturing plants may be accounted for by the inauspicious start. The plants reached maturity much later in the season than the crop of the year previous, planted much later. The number of mature plants was low. The fertilized plot yields were above those of the check and normal plots. Blood and sludge gave good early appearance and above average weights. This plant is benefitted by heavy applications of fertilizer, and sludge is quite satisfactory.

Cauliflower.

The number of plants which matured was very low, as well as variable. Despite early planting, the plants did not grow well and did not produce heads until a second growth of leaves occurred late in August. Early in the season the plants looked well, but did not maintain their growth. The proximity to tobacco plants is believed to be the reason for lack of development, for the tobacco plant roots were found to extend out under the cauliflower plants and had an effect similar to that on onions.

Onions.

Onion seed was planted May 19th and germinated well. The plants grew normally for a few weeks and then stopped growth and, later, lost in substance. The onions had been planted close to the tobacco plants, which grew fast, and as their rapid growth was coincident with the onion failure, they were thought to be the cause. On examining the soil beneath the onions it was found to be permeated with tobacco roots. These roots extended several feet in every direction and doubtless robbed the onion plants of nourishment—both moisture and nutriment. Onions are particularly susceptible to nitrogenous elements, and the small plants soon succumbed.

Tobacco.

White burley seed was sown on March 23rd and the plants set out May 25th. The growth was rapid throughout the season and the root system extensive. On the sludge plots the plants were average during the early part of the season, but improved later especially in the N 80 section. Photographs taken July 15th show a marked superiority of the sludge plot over the check. In the N 120 section the soil shallowness was effective and the plants smaller. The tankage plot here gave a very heavy yield. There is little doubt that nitrogenous fertilizer plays a large part in the growth of tobacco, and sludge furnishes this in an available form and should be applied in large amounts.

General.

As has been noted previously some fertilizers possess the important quality of giving early acceleration in growth, to a much greater extent than others. To start the plant in a medium where it can easily obtain the plant food necessary for rapid growth, influences its total growth and maturity. A later available food will not make up for this deficiency nor produce as great a yield. In the light of the experiments in 1920 and 1921, sludge can be claimed to possess this feature, probably to a greater extent than any of the other nitrogenous fertilizers used. This is, then, a marked advantage possessed by activated sludge which should make it valuable for germination work, hothouse beds, seedlings and early marketable produce.

As regards residual effect of plant food in fertilizers, applied in earlier years, it is well known that nitrogen as nitrate is extremely soluble, and is readily lost in drainage water. The existing conditions during the above experiments made it impossible to judge between the residual effects of sludge as compared with the other fertilizers. One season's effect would in any case not be sufficient to justify conclusions.

The open, porous and variable subsoil and the limit in number of plants, make conclusions difficult, but the results justify large experimental trials where individual variations are subservient to the general character of the crop.

In general, the results of the 1921 experiment bear out the conclusions from the 1920 experiment, and it is hoped that this product, "Activated Sludge," may soon be available for commercial use. The interest taken in the exhibit at Toronto National Exhibition justifies the assumption that the crop producer is alive to the value of fertilizers and that municipalities are anxious to improve their sewage disposal systems and return to the public the valuable by-products of sewage.

Explanation of diagrams, tables and photographs.

1. Diagram of plots in area under experiment.
2. Table I—Weights and contents of fertilizers used.
3. Table II—Varieties of plants and dates of planting.
4. Table III—Table of early maturity—grading of first marketable produce, by sections.
5. Graph N 40 section—showing relative appearance of vegetables on sludge plot throughout the growing season.
6. Graph N 80 section similar to 5.
7. Graph of N 120 section similar to 5.
8. Table IV—Weights of marketable produce showing the percentage on the sludge, check and mormal plots, relative to the average.
9. Photographs A-H.
   - (*a*) General view of N 40 section—July 15th, 1921.
   - (*b*) General view of normal and N 80 plots, July 15th, 1921.
   - (*c*) General view of N 120 section,
   - (*d*) Tobacco plants N 80 section, July 15th,
   - (*e*) Tobacco plants N 120 section, July 15th,
   - (*f*) Tobacco plants N 40—sludge and blood plots,
   - (*g*) Tobacco plants check plot (no nitrogen), July 15th,
   - (*h*) Tobacco plants N 40—sludge plot, July 15th.

THE RELATION OF IRON TO ACTIVATED SLUDGE.

By George H. W. Lucas, B.A.

During the activation of sewage in an iron tank at the Experimental Station, Toronto, a sludge was developed quite distinct in properties and color from the sludge which formed in the main tanks. It was well nigh ideal in that it met the conditions recommended in a biography on activated sludge, namely, it was golden brown in color, gave a clear, sparkling effluent and was stable for a period of time.

A litre of sludge from the main tanks settled in one hour to about 20% solids and gave a clear supernatant liquid but after four to eight hours rose to the surface due to gas formation. A sample of the same sludge activated in the iron tank settled more rapidly than the former sludge, gave a clearer supernatant liquid and remained at the bottom for over a month. At the end of that time it gave no indication of rising.

Immediately the presence of iron suggested itself and analysis showed that the ordinary sludge had 2.0% iron on a dry basis and 6.1% of the ash was iron, while the new sludge was 5.1% iron on a dry basis and its ash was 14.9% Fe. Evidently iron was playing an important part in this sludge process.

An analysis of the raw sewage showed only four parts per million of iron present. This did not account for all the iron present in the sludge; so therefore some iron must have come from the tank. Having in mind all the possible reactions, it was very difficult to predict any certainty how iron became deposited in the sludge. Three possibilities presented themselves, viz, by bacterial action, by chemical precipitation, and lastly, by small pieces of rust catching in the sludge.

A search of the literature on iron bacteria gave very little encouragement. Biologists still disagree on the theory that some bacteria deposit iron. An iron deposit is found on the sheath of this bacterium, but whether iron is absolutely essential to the life of this organism is not positively known. The best references found were in a work by Harder, and the following extracts have been taken from his publication:

Work of Harder.

1. Harder[1] concludes that according to present knowledge there are three principal groups of iron depositing bacteria. Those that precipitate $Fe(OH)_3$ from solution of ferrous bicarbonate, using the CO_2 set free and the available energy of the recreation for their life processes.

Those that do not require Fe CO_3 for their vital processes but do cause the deposition of $Fe(OH)_3$ when either inorganic or organic salts are present.

Those that attack iron salts or organic acids using the organic acid radical as food leaving $Fe(OH)_3$ or basic ferric salts that gradually change to $Fe(OH)_3$.

Bacillus M_7 was discovered by Mrs. Mumford* during an examination of iron bearing colliery waters in England. It consisted of $Fe(OH)_3$ of fine granular texture with some scattered threads of higher iron bacteria. After various inoculations of this granular material in culture media a bacillus was isolated which produced an enzyme that had the power of precipitating $Fe(OH)_3$ from either ferrous or ferric solutions. Mrs. Mumford states that she succeeded in isolating the enzyme from the organism by filtration.

Crenothrix, the largest of iron bacteria can live in a water which has less than two parts of iron per million. Leptothrix is a simple thread form whose sheaths are a yellowish brown $Fe(OH)_3$.

Theories of Iron Deposition by Bacteria.

Several explanations have been offered for the deposition of $Fe(OH)_3$ by iron bacteria. Some investigators believe that the precipitation is merely a chemical process in no way connected with the internal activity of the cell. whereas others claim that the process is one of oxidation of ferrous to ferric compounds and that it is necessary for the life processes of the organisms. Among the first to study the activities of iron depositing thread bacteria were

*Can. Engineer 28, P. 336 states that these experiments were conducted by Mr. E. M. Mumford. Mr. F. A. Dallyn, C.E., M.E.I.C., Director of the Sanitary Engineering Division, Toronto, states this is an error, and authorizes quoting Mrs. Mumford.

Cohn and Zopf. Cohn believed that $Fe(OH)_3$ was deposited as a result of the activity of the living cells and that a deposition occurred in the same manner as the deposition of silica takes place in the tests of diatoms. Zopf[4] some years later stated that he found $Fe(OH)_3$ being deposited on empty sheaths from which all living cells had been removed. He was of the opinion, therefore, that the storing up of $Fe(OH)_3$ in the sheaths was merely the result of mechanical processes, the iron compounds being taken up by a mucilaginous coating on the sheaths. Later, Winogradsky[5] investigated the physiology of iron bacteria. Experiments were conducted with leptothrix and in the publication of his results, in 1888, he states that leptothrix will live and grow only in solutions in which iron is present in the ferrous form, and that only where living cells are present in a sheath is there any coloration of the sheath due to oxidation of ferrous salts. He also found that the sheaths did not take up mechanically any $Fe(OH)_3$ that may be present in the solution and believed that the coloration is due to $Fe(OH)_3$ being given off by the cells and caught in the sheath which encloses them. He concludes from this that the oxidation of ferrous compounds to form $Fe(OH)_3$ is necessary for the life and the growth of the organisms and that this process furnishes energy to the cell for the assimilation of food which consists of organic compounds of which he found only a small amount was necessary. He worked with solutions of ferrous carbonate.

Molisch[6] in a series of experiments proved that leptothrix will grow profusely in an iron-free medium, forming perfectly colorless sheaths. If iron or manganese were present he found they were oxidized and taken up by the sheaths. He likewise found that iron or manganese present in the solution causes longer and thicker threads and that sheaths containing live cells accumulate $Fe(OH)_3$ more abundantly. However, threads in which the cells have been killed by boiling in water are still capable of taking up $Fe(OH)_3$ in their sheaths. He determined further that where there was little chance of oxidation a ferrous compound would accumulate in the sheath and cause the same luxuriant growth as $Fe(OH)_3$. He concludes that these organisms show a marked physico-chemical attraction for iron and the manganese compounds and that the change from ferrous to ferric compounds is due to simple oxidation and is not connected with the life processes of the cells, as Winogradsky claimed. He claims that the living cells probably have some influence in keeping the sheaths in a condition in which it can accumulate $Fe(OH)_3$ more easily than the empty ones.

Ellis, in 1907 set forth his belief that the deposition of $Fe(OH)_3$ around bacterial threads is purely mechanical. He believes that Winogradsky had no solid basis for his conclusions and thinks, with Zopf, that the accumulation is the result of the catching up of the particles of $Fe(OH)_3$ present in the water by a mucilaginous covering which surrounds the sheath. The presence of such a sheath was demonstrated by Zopf in 1878. Ellis, like Winogradsky, worked principally with leptothrix, but also examined other cultures, but believes that what is true of leptothrix is true of all iron bacteria.

Lieske[8] in 1911 experimented with spirophyllum, a culture with which Ellis also worked. He finds this organism will grow only in solution containing $FeCO_3$ and that other ferrous salts will not take the place of $FeCO_3$. He finds that much organic matter may completely stop the growth of spirophyllum, but that where abundant CO_2 is present in water and organic matter is entirely absent this organism will grow profusely. He claims that the carbonate radical

furnishes food for the spirophyllum and that the latter oxidizes the $FeCO_3$ to $Fe(OH)_3$ mainly for the purposes of obtaining carbon. Like Winogradsky, he believes that the oxidation may furnish energy to the organism for the assimilation of food, which in this case is CO_2. Mrs. Mumford in 1913 states that Bacillus M_7 forms a precipitate of $Fe(OH)_3$ in ferric as well as ferrous solutions. Organic compounds were used as a source of food. $Fe(OH)_3$ was precipitated only under aerobic conditions, and under anaerobic conditions the hydroxide was somewhat dehydrated. She ascribes these reactions to an enzyme which she states she succeeded in isolating from the organism by filtration. The observations of Mrs. Mumford are open to doubt, because she did not use control cultures, and the possibility of chemical oxidation taking place in the ferrous solutions has not been eliminated.

After failure to identify any of these iron organisms by microscopic examination a thorough search was made through the literature to see if iron had played any role in the activated sludge process. Several references[9] were discovered where chemists had found from nine per cent. to eighteen per cent. iron in sludge on dry basis. Most encouraging of all were some publications by G. J. Fowler from his laboratory at Manchester. An extract from Can. Eng. 28, p. 336, is as follows:—

"An interesting development is that described by Dr. Gilbert Fowler and Mrs. Mumford, of Manchester. They found that by innoculating a tank effluent with an organism M_7 and adding a small dose of ferric salt—1 grain per gallon —blowing air through for six hours and allowing to stand for six hours for precipitation, a very clear liquor could be obtained. This organism is found in nature in waters impregnated with iron and once its growth is established there does not appear to be any difficulty in maintaining it." Again in Can. Eng. 30, p. 228. "It would appear that the activated sludge process consists broadly of three operations—a clotting or clarifying action, a rapid carbon oxidation and finally nitrification. It is probably to some extent the result of the activity similar in character to the M_7 organism which was definitely shown to depend on enzymic action whereby traces of iron appeared to start floccation of the whole sewage. The M_7 bacillus is fairly ubiquitous as it has been found that sewage containing iron and a certain amount of activated sludge, but in which clarification has not been effected, can be made to clarify at once by a small quantity of properly activated sludge."

Owing to the claim that M_7 was fairly ubiquitous it was concluded that this organism must be present and a small sample of effluent was treated with a little ferrous sulphate and aerated in a tall glass cylinder fitted at the base with filtros. Iron was precipitated and a clear effluent obtained. Microscopic examination again failed to reveal an organism to which this peculiarity could be attributed.

The presence of M_7 was doubtful and in order to determine if M_7 were responsible a quantity of sewage was boiled for one hour, some iron salt added and aeration begun. It was the expectation that there would be no deposit of iron, but the same result was obtained as with unsterilized sewage. Apparently some factor other than M_7 was present.

Chemical precipitation seemed to be the only explanation. It has been proved that in the activation process much ammonia is evolved, which would naturally make sewage alkaline. Then, there are other sources by which alkali gets into the sewage. Tests of the plant effluent showed an alkalinity as high as 200 p.p.m.

Iron Precipitated by Alkaline Sewage.

In order to see if chemical precipitation of the iron in Toronto sewage were connected with the alkalinity, three tall cylinders fitted with filtros were filled as follows and aerated:—

TABLE NO. 1

No. 1—300 cc. Distilled Water.	No. 2—300 cc. Boiled Effluent.	No. 3—300 cc. Effluent made just acid with—
0.5g of $FeSO_4$ $7H_2O$.	0.5g of $FeSO_4$. $7H_2O$.	H_2SO_4+0.5g of $FeSO_4$ $7H_2O$.

These were aerated four hours.

No. 1 showed no change.

No. 3 showed no change, i.e., no precipitate.

No. 2 turned brown very rapidly and a precipitate came in a few seconds quite a heavy precipitate in four hours.

In order to demonstrate the formation of the flock in the presence of iron the following experiment was performed.

2,500 cc. of sewage containing four p.p.m. iron and of 150 p.p.m. alkalinity were aerated sixteen hours in a tall glass cylinder fitted with filtros. At the same time a 300 cc. sample of this sewage was aerated after 0.5 g. $Fe\ SO_4\ 7H_2O$ was added. At the end of fifteen hours the large tube had a small grey flock, but the small one had a large golden brown one.

There remained one way yet in which it could be decided whether bacteria or chemical precipitation was responsible for the iron deposition in Toronto sewage. A sample of sludge was washed six times with tap water to free it from any alkaline solution. It was then washed with distilled water and dried on a Buchner filter. The sample was put in one litre of water and was well shaken. It was neutral to litmus. By this means a large amount of bacteria were introduced. A 300 cc. sample of this together with 0.5 g. of $Fe\ SO_4\ 7H_2O$ was aerated for twelve hours with no change apparent in the flock. When a few cubic centimetres of alkali solution were added a brown color was imparted to the sludge in a short time.

The next step was to find the effect of sewage on iron itself during aeration. Four five litre tubes fitted with filtros were treated as follows:—

TABLE NO. 2

	Tube 1	Tube 2	Tube 3	Tube 4
Amount raw Sewage	4 L.	4 L.	4 L. Boiled Sewage	4 L. Boiled Sewage
Iron present	5 strands clean soft iron wire no trace of rust.	None	5 strands clean soft iron wire free from rust.	None

TABLE NO. 2—*Continued*

	Tube 1	Tube 2	Tube 3	Tube 4
Time of aeration 2 Hours.	Quite Brown, Distinct Flock.	Very Little Change.	Distinct Brown Flock.	Very Little Change.
3 Hours	Brown Colour more pronounced.	Very Little Change.	More Brown Flock.	Very Little Change.
Estimation of Iron in Flock after 4 Hours.	35 p.p.m.	8 p.p.m.	15 p.p.m.	8 p.p.m.
24 Hours.....	35 p.p.m.		46 p.p.m.	
72 Hours.....	63 p.p.m.		60 p.p.m.	

The wide variation in figures may be due to the fact that it was hard to get a uniform sample of the flock.

Autoclaved sewage aerated in the presence of iron wire behaved the same as raw unsterile sewage. A 300 cc. sample of autoclaved sewage (at 18 lbs. for 35 min.) when aerated in the presence of a clean sterile coiled iron wire became brown in color in fifteen minutes. In one and one-half hours there was sufficient flock to settle rapidly. This flock when examined microscopically gave no evidence of bacteria present.

That the presence of iron characterizes the color of the flock, aids in clarification, rapid settling and in keeping down the flock is shown by the data in the following series of experiments. (See tables III. and IV.)

Settling Rapidity—3 and 4, fast and clear; 2, rapid but not so clear; 2, 3 and 4, more rapid than No. 1; No. 6, more rapid and clearer than No. 5. The sludge varied in color from yellowish brown to dark brown, depending on the iron present.

The presence of iron apparently increased the total nitrogen in the sludge. A large sample of sludge aerated for three days gave total nitrogen on a dry basis 4.2%, 4.6%, 4.8% on each of the three days. Iron was added to this and aeration continued for three days. The total nitrogen then was 5%, 5.5%, 5.7% at the end of each day.

The moisture content of the sludge was not changed by the presence of iron. Samples of ordinary and iron sludge were centrifuged and both ran from 91-92% moisture. The rate of evaporation from equal amounts of ordinary and iron sludge in dishes of the same size at a temperature of 110° C was determined and gave but little difference. For a period extending two and one-half hours the rate of the ordinary sludge was 0.160 g. of water per minute, while that of the iron sludge 0.165 per minute.

Finally it was deemed advisable to analyze sludges from different activated sludge plants in the United States. Samples of dried sludge were obtained and the following table gives the result of the analyses:—

Color varies with per cent. of iron from grey black to chocolate brown. Worcester reddish brown.

In the table No. IV. it would hardly be fair to use the total nitrogen figures for comparison, for they would depend a great deal on the drying and age of the dry sludge.

TABLE III.

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Amount of Sewage and Sludge	5 Litres	5 Litres	5 Litres	5 Litres	2,700 Gal.	2,700 Gal.
State	Raw and Partly act'd	Raw and Partly act'd	Raw and Partly act'd	Raw and Partly act'd	Raw and Partly act'd	Raw and Partly act'd
Iron Present	None	5g $FeSO_4$. $7H_2O$	2.5g $FeSO_47H_2O$	Iron Wire Coil	None	18 lbs. $FeSO_4$. $7H_2O$
Time of Activation	4 Hours	4 Hours	4 Hours	4 Hours	3 Days	3 Days
Time Elapsing Before Rising after Settling	4 Hours	24 Hours	24 Hours	23 Hours	5 Hours	Circ 7 Days
Effluent	Effluent Like 5	Slightly Yellowish Effluent	Clear Effluent	Clear Effluent	Small Particles Floating	Clear Effluent

TABLE IV

	Houston	Toronto	Urbana	Milwaukee	Cleveland (1)	Cleveland (2)	Worcester
Dry Basis % Fe	1.1%	1.65-2.0	2.3	4.8	13.36	17.29	19.04
%N	4.3	3.3	4.18	4.31	3.2	5.7	3.0
Non Volatile	35.3%	50.2%	40%	46.4%	56.0%	8%	38.6%
Volatile	64.7%	49.8%	60%	53.6%	44.0%	51.2%	61.4%
Iron p.p.m. of Sewage	No Data	4 p.p.m.	No Data	10–100 p.p.m.	0———	———300 p.p.m.	No Data

General Conclusions.

As a result of this investigation it is quite evident that iron plays a very important role in the activated sludge process and the difference in iron content explains the difference in color, flocking and settling of the various sludges which are formed in activated sludge plants.

Attention is also drawn to the M_7 organism and question is raised as to the necessity of its presence to begin floccation of iron since the sewage itself is alkaline and thus forms the hydrate. Finally, it is worthy of note that iron pipes are very readily oxidized by the alkaline sewage in the presence of oxygen.

The author desires to express his thanks to Mr. F. A. Dallyn, Director of the Sanitary Engineering Division, Toronto, and to Mr. A. V. Delaporte, chemist in charge of the Experimental Station, under whose personal supervision this investigation was conducted.

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THE RELATION BETWEEN GAS EVOLVED AND THE DIGESTION OF SEWAGE IN ACTIVATED SLUDGE.

By George H. W. Lucas, B.A.

In the spring of 1921 an attempt was made to determine the relation existing between the composition of the gas evolved and the digestion of the sewage in the activated sludge tanks at the Government Experimental Station, Stanley Park, Toronto.

The percentage of carbon dioxide was relatively small, and in order to measure it accurately eighteen litres of the gas were passed through Baryta water and the CO_2 determined from the amount of barium carbonate precipitated. The oxygen percentage was measured in the ordinary way, using alkaline pyrogallol. Nitrogen was estimated by difference, since no methane or carbon monoxide were present.

A preliminary investigation on the sludge tank (data in Table 1) indicated that the amount of carbon dioxide and oxygen in the escaping gas was dependent on the quantity of air used as well as the amount of oxidizable matter present. At any one place in the tank, the percentages of CO_2 and O_2 were fairly constant. In

view of the fact that the sewage was not constant either in composition or in flow it was decided to work with an apparatus in which each factor would be under control.

The investigation now fell naturally into two parts: the activation of sewage of known composition with varying amounts of air and the activation of a mixture of sewage and the sludge in a similar manner. Assuming that the air used in aerating the sewage furnished all the oxygen whereby the nitrogenous and carbonaceous matter is oxidized, it is quite probable that the rate of oxidation is dependent on the volume of air admitted and the amount of oxidizable matter present. It is, also, evident that a state of equilibrium will be reached for the products of the reaction.

As a preliminary experiment it was decided to see if by using a small amount of air, one could arrive at a state of equilibrium and detect it by estimating the nitrates and nitrites together with the CO_2. From the data in Table 2 it is quite plainly observed that equilibrium in the carbonaceous oxidation was reached in three days. The nitrate was very slow in forming, thus giving an indication that carbonaceous oxidation is accomplished more easily than nitrogenous.

The next investigation was conducted on a fresh sample of sewage direct from the sewer, aerating with a larger volume of air. A more complete analysis was made, and from the data in Table 3 it is evident that a state of equilibrium in the nitrate was arrived at in three days. There is also an indication here of a more rapid oxidation in the carbonaceous matter.

It remained to discover the minimum time in which one could reach the equilibrium stage and accordingly a fresh sample of sewage was aerated with a large volume of air. Data in Table 4 furnishes evidence of this stage being reached in forty-eight hours.

Before aerating a sample of sewage which was inoculated with sludge, it was considered expedient to ascertain the effect of the presence of sludge on a sample which had been brought to a state of equilibrium by aeration. A new sample of fresh sewage was aerated similarly to the previous one, and in forty-eight hours the equilibrium state was almost reached. (Data Table 5A) Aeration was continued for six days, and then the tank was inoculated with 14% washed activated sludge. The data in Table 5B leads one to deduce that the effect of adding sludge is almost nil, and therefore the sludge itself was in a state of equilibrium in respect to oxidation by the air when it was introduced.

If this be the case then, the presence of sludge in a sample of sewage should not increase the rate of oxidation. A sample of fresh sewage was inoculated with 17% washed sludge and was aerated similarly as the previous samples were. Data in Table 6 indicates that the presence of this sludge did not hasten the oxidation, for this sample behaved in no wise differently than a sample of sewage alone.

The accompanying graph will help the reader to see more quickly that the presence of sludge did not hasten the formation of nitrates. The amount of solids present in the raw sewage no doubt has some effect, and possibly accounts for the more rapid rate in the case of Table 4.

The reader's attention will no doubt be drawn to the peculiar fluctuation in CO_2. This was due to the varying amounts of CO_2 in the air at the plant. In Table 6 the net CO_2 shows a steady decrease till a fairly constant state is reached.

TABLE NO. I.

Month	Date	Time	% Gas from Activating Tank			From Re-activating Tank			% Gas in Air			Remarks
			CO_2	O_2	N_2	CO_2	O_2	N_2	CO_2	O_2	N_2	
May	30	Noon 12.00	.97	19.83	79.20	1.49	18.81	79.70	.....	.....	.....	
June	1	a.m. 10.30	.61	20.29	79.10	1.24	19.66	79.10	.....	.....	.....	Sewage off during night, turned on at 9.00 a.m.
June	1	p.m. 4.00	.83	20.07	79.10	1.19	19.21	79.60	.....	.....	.....	
June	2	Noon 12.00	.50	20.40	79.10	1.14	19.06	79.80	.....	.....	.....	Sewage off during night, turned on at 9.20 a.m.
Up till this time, sample of gas in both reactivating and activating tanks were taken from third baffle. The collecting apparatus was then shifted to the settling tank, while the apparatus in the reactivating tank was left at the third baffle.												
June	7	p.m. 1.45	1.75	18.35	79.90	1.16	18.94	79.90	.....	.....	.....	Sewage off for three days.
June	8	a.m. 10.00	1.47	18.53	80.00	.65	19.55	79.80	.....	.....	.....	Sewage off during night.
June	8	p.m. 3.00	2.04	17.36	79.60	1.06	19.04	79.90	.....	.....	.....	Sewage turned on 9.20 a.m.
June	9	a.m. 10.30	2.27	17.93	79.80	1.29	18.61	80.10	.....	.....	.....	Sewage turned off during night.
June	9	Noon 12.00	.....	.....	.....	.....	.....	.....	.27	20.42	79.30	.....
June	9	p.m. 4.00	1.70	18.60	79.70	1.19	18.81	80.00	.....	.....	.....	

TABLE 2.

Day	Month	Date	Time	a.m. p.m.	Temp. Tank	D. O.	% Gases			Nitrate	Nitrite
							CO_2	O_2	N_2		
Thursday	June	23	9.30	a.m.	16.0	2.8	.....	.....	.....	0	0.25
Thursday	June	23	2.00	p.m.	22.0	1.9	0.81	19.79	79.4	0	0
Thursday	June	23	4.45	p.m.	23.0	0.5	1.23	19.47	79.3	0	0
Friday	June	24	9.15	a.m.	23.0	0.3	1.39	18.91	79.7	0	0
Friday	June	24	4.45	p.m.	24.0	0.9	1.62	18.82	79.8	0	0
Saturday	June	25	9.15	a.m.	22.5	3.8	1.19	19.31	79.5	0	0.1
Sunday	June	26	10.45	a.m.	23.0	3.7	1.43	18.87	79.7	0	0
Monday	June	27	9.10	a.m.	24.0	4.0	0.83	19.67	79.5	0	0.2
Monday	June	27	4.20	p.m.	25.0	4.1	1.04	19.36	79.6	0	0.1
Tuesday	June	28	9.10	a.m.	24.0	4.2	0.85	19.75	79.4	0	2.8
Tuesday	June	28	4.45	p.m.	24.0	4.4	0.95	19.75	79.3	0	1.0
Wednesday	June	29	9.10	a.m.	24.0	4.6	0.67	19.93	79.4	0	0.6
Wednesday	June	29	4.45	p.m.	24.5	4.7	0.90	19.80	79.3	Trace	Trace
Thursday	June	30	9.20	a.m.	24.0	4.6	0.76	20.04	79.2	1.0	0
Thursday	June	30	4.45	p.m.	24.5	4.7	.....	.....	79.2	1.50	0
Friday	July	1	12.45	Noon	25.5	4.6	1.07	19.69	79.3	3.00	.....

TABLE 3

Day	Month	Date	Time	a.m. p.m.	Temp. Tanks	D.O.	% GAS			Nitrate	Nitrite	Free NH_3	% Solids in Half Hour standing		
							CO_2	O_2	N_2				Alb. NH_3	Sample	Color Sewage
Wednesday	July	6	10.00	a.m.	19.0	3.9	0.42	20.48	79.1	0	Trace	11.0	8.2	0.5	Grey
Wednesday	July	6	4.00	p.m.	24.5	4.6	0.91	19.89	79.2	Trace	0.15	2.8	6.8	1.4	Yellow Brown
Thursday	July	7	9.10	a.m.	25.0	5.5	0.37	20.43	79.2	0.45	0.3	4.4	8.0	2.0	Golden Brown
Thursday	July	7	3.30	p.m.	26.5	5.2	0.65	20.15	79.2	1.25	Trace	7.0	6.0	2.4	Dark Brown
Friday	July	8	9.10	a.m.	25.5	5.5	0.26	20.24	79.5	1.75	0	1.2	5.6	2.5	Dark Brown
Friday	July	8	3.30	p.m.	25.5	5.5	0.53	20.07	79.4	45	0	0.6	6.0	2.5	Dark Brown
Saturday	July	9	9.05	a.m.	23.5	5.8	0.20	20.70	79.1	2.5	5.0	0.5	4.2	2.5	Dark Brown
Saturday	July	9	3.30	p.m.	24.5	5.8	0.45	20.35	79.2	5.0	1.0			2.5	Dark Brown
Sunday	July	10	9.25	a.m.			0.29	20.51	79.2	5.0	0.1			2.5	

Effluent clear and sparkling.

TABLE 4

Day	Month	Date	Time	a.m. p.m.	Temp. Tank	Miller D.O.	% Gas CO_2	% Gas O_2	% Gas N_2	Nitrate	Nitrite	Free NH_3	Alb. NH_3	P.P.M. Tot. Icc. of Gas N_2	P.P.M. Tot. Icc. of Gas CO_2	P.P.M. Tot. Icc. of Gas O_2	Dissolved per litre N_2	Solids Settling in Half Hour Hr.	Solids Settling in Half Hour Color
Mon.	July	11	10.00	a.m.	19.0	5.4	0.21	20.59	79.2	.2	0	11.2	13.0	72	8.3	4 5	15.7	½%	Grey
Mon.	July	11	3.30	p.m.	23.0	5.5	0.54	20.36	79.1	0.2	0 2	11.5	11.5	69	15.4	4 6	18.0	2%	L. Brown
Tues.	July	12	9.10	a.m.	24.5	9.6	0.38	20.32	79.3	5	1.5	3.0	11.5	56	4.0	3.0	14.4	2 5%	L. Brown
Tues	July	12	3.30	p.m.	26.0	5.4	0.48	20.42	79.1	8	0 1	3 0	13 5	51	4.0	4.5	13.7	3%	L. Brown
Wed.	July	13	9.10	a.m.	25.0	5.5	0.32	20 38	79.3	15	1.0	6.5	3.5	51	4.4	5.5	13 9	3 5%	L. Brown
Wed	July	13	3.30	p.m.	26.5	5.5	0.25	20.65	79.1	16	2.5	2.3	11.8	51	0 5	5.3	13 6	3 5%	D. Brown
Thurs	July	14	9 10	a.m.	26.0	5.7	0.23	20.37	79.4	14	0.5	3.1	6.7	51	22	6.0	14.2	3.5%	D. Brown
Thurs	July	14	3 30	p.m.	26.5	5.7	0.12	20.78	79.1	15	1.8	4.0	6.4	52	2 7	6.0	14 2	3.5%	D. Brown
Fri	July	15	9.10	a.m.	25.0	5.8	0.12	20.58	79.3	15	0.12	2.2	7.2	80	3.1	6.1	14 0	4%	D. Brown
Fri	July	15	3 30	p.m.	25.0	5.8	0.18	20.72	79.1	16	0.2	1.6	6.3	51	4.3	6.1	14 4	4%	D. Brown
Sat	July	16	9 10	a.m.	23.5	6.0	Lost		79.4	15	.05	1.6	12.0	51	1.8	6 1	14 1	4%	D. Brown
Mon	July	18	9 10	a.m.	24 0	6 0	0.36	20.04	79.6	15	Trace	6 5	18.0	50	1 7	6 1	13 8	4%	D. Brown
Mon	July	18	3 30	p.m.							Trace	1.5	8 0	50					

TABLE 5A

Day	Month	Date	Time	a.m p.m.	Tank Temp.	Miller D.O.	Agitating Gas			P.P.M.		Free NH_3	Alb. NH_3	Total Nitrogen in sample	Total Nitrogen in effluent	Total Solids in 100cc sample	Total Solids in 100cc effluent	Dissolved Gas per Litre			Amt. Solids ½ Hr.	Color of Solids
							CO_2	O_2	N_2	Nitrate	Nitrite							CO_2	O_2	N_2		
Wednesday.	July	20	3.15	p.m.	18.5	6.0	0.33	20.47	79.2	1.2	0.75	7.0	8.0	76	65	0.112	0.060	14.6	4.8	15.8	1%	Grey
Wednesday.	July	20	3.30	p.m.	22.0	5.9	0.31	20.69	79.0	1.2	0.8	7.0	6.0	57	43	.....	.....	16.4	5.3	15.3	1%	Grey
Thursday...	July	21	9.10	a.m.	22.0	5.7	0.33	20.07	79.6	3.0	1.0	7.0	6.0	40	37	0.077	0.057	13.7	5.1	14.8	1%	Slightlybrown
Thursday...	July	21	3.30	p.m.	23.5	6.2	0.29	20.51	79.2	4.4	0.5	7.5	7.0	38	35	.....	.....	6.5	6.0	14.5	1.2%	Yellow brown
Friday.....	July	22	9.10	a.m.	23.0	6.1	0.36	20.04	79.6	10	Trace	3.5	5.0	34	29	0.071	0.048	4.8	6.4	14.6	1.2%	Yellow brown
Friday.....	July	22	3.30	p.m.	24.0	6.1	0.36	20.64	79.0	10	0.4	3.5	6.0	31	21	.....	.....	3.9	6.3	14.3	1.2%	Yellow brown
Saturday...	July	23	9.10	a.m.	23.0	6.3	0.15	20.35	79.5	12	1.0	1.5	4.5	28	22	0.076	0.057	3.6	6.5	14.3	1.3%	Yellow brown
Monday....	July	25	9.10	a.m.	24.0	6.3	0.20	20.59	79.2	10	0.2	1.0	4.5	28	23	0.062	0.062	1.6	6.3	14.1	1.4%	Yellow brown
Monday....	July	25	3.30	p.m.	25.5	6.4	0.24	20.56	79.2	13	0.2	2.0	4.5	.....	.....	.....	.....	3.1	6.9	15.6	1.5%	Yellow brown
Tuesday....	July	26	9.10	a.m.	24.5	6.4	0.23	20.33	79.4	12	0.2	2.0	4.5	27	23	.....	.....	7.5	6.3	13.9	1.5%	Yellow brown

TABLE 5B

INOCULATED WITH 14% SLUDGE

Day	Month	Date	Time	a.m. p.m.	Tank Temp.	Miller D.O.	Agitating Gas			P.P.M.		Free NH_3	Alb. NH_3	Total Nitrogen in sample	Total Nitrogen in Effluent	Total Solids in 100cc sample	Total Solids in 100cc Effluent	Dissolved Gas per Litre			Amt. Solids in ½ hour	Color Solids
							CO_2	O_2	N_2	Nitrate	Nitrite							CO_2	O_2	N2		
Tuesday....	July	26	2.00	p.m.	25.5	6.4	.....	.....	79.2	12	0.5	3.0	60	153.5	22	0.249	.050	0.6	5.6	13.8	15%	Greyish black
Tuesday....	July	26	3.30	p.m.	26	6.4	0.41	20.09	79.5	15	0.9	7.5	79	140	31	.....	.....	2.5	6.0	13.5	15%	Greyish black
Wednesday.	July	27	9.10	a.m.	26	6.3	0.34	20.26	79.4	16	1.7	2.4	66	128	29	0.233	.053	Bro	ke		14%	Tinge of brown
Wednesday.	July	27	3.30	p.m.	26.5	6.3	0.48	20.12	79.4	16	1.75	5.8	91	143	31	.....	.....	Ap	para	tus	14%	Tinge of brown
Thursday...	July	28	9.15	a.m.	25.5	6.3	0.38	20.42	79.8	17	0.75	2.4	80	134	27	0.233	.058	2.6	6.1	13.8	14%	Little browner
Thursday...	July	28	3.30	p.m.	26	6.2	0.42	20.18	79.4	16	0.60	2.6	66	127	31	.....	.....	1.8	6.0	14.0	14%	Brownish
Friday.....	July	29	9.10	a.m.	24.5	6.1	.....	.....	79.5	17	0.35	1.4	59.5	126	31	.....	.....	2.3	6.2	14.2	14%	Dark brown
Friday.....	July	29	3.30	p.m.	25	6.1	0.34	20.46	79.2	18	0.15	2.0	58.4	.....	.....	.....	.....	0.2	6.1	14.1	14%	Dark brown

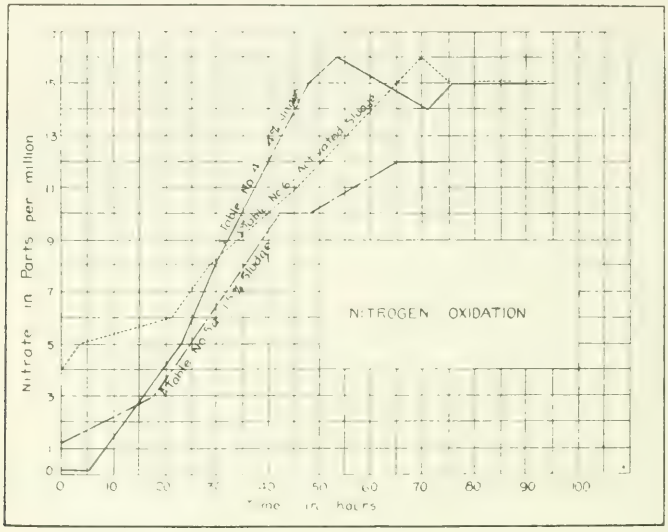
Total Nitrogen in Sample 5. 6. Total Nitrogen in Effluent 5. 1.

TABLE 6

Day	Month	Date	Time	a.m. p.m.	Temp. Tank C.	Miller D.O.	Percentage of Gas in Ag.			Percentage in Air			Net CO_2	Nitrate	Nitrite	Free NH_3	Alb NH_3	Total Nitrogen in Sample	Total Nitrogen in Effluent	Total Solids in Sample	Solids in Effluent	C.C. per Litre Dissolved Gases			Amt. of Flock in ½ hour	Color of Flock
							CO_2	O_2	N_2	CO_2	O_2	N_2										CO_2	O_2	N_2		
Thur....	Aug	4	11.50	a.m.	20	2.2	.90	19.70	79.4	.20	20.70	79.1	.70	4	.02	6.0	38.0	186	66	.....	.....	Brok	e	us	17%	Grey black
																						App	arat			
Thur....	Aug.	4	3.30	p.m.	21	5.2	.63	20.17	79.2	.18	20.92	78.9	.45	5	0 25	4.5	40.0	221	25	.401	.050	3.2	4.4	16.8	16%	Grey black
Fri	Aug.	5	9.30	a.m.	21	5.3	.49	5.21	79.3	.20	20.60	79.2	.29	6	0.05	5.0	57.0	186	18	.349	.045	4.0	5.0	15.4	16%	Grey black
Fri.....	Aug.	5	3.20	p.m.	24	5.5	.49	20.11	79.4	23	20.67	79.1	.26	8	0.12	8.0	84.0	204	.....	.225	.....	2.9	5.5	15.2	17%	Grey black
Sat.....	Aug.	6	9.30	a.m.	23	5.4	.40	20.30	79.3	.13	20.33	79 4	.27	11	0.2	3.7	58.0	194	20	.....	.050	1.2	5.4	14.6	17%	Slightly brown
Mon....	Aug.	8	9.30	a.m.	21	5.6	.28	20.42	79.3	.14	20.56	79.3	.14	16	Trace	2.2	65.0	169	25	.332	.056	3.7	6.0	14.6	.....	
Mon....	Aug.	8	3.30	p.m.	23	5.7	.18	20.72	79.1	.14	20.76	79.1	.04	15	Trace	4.2	34.0	188	16	.....	.....	3.7	6.0	14.3	17%	Slightly brown
Tues....	Aug.	9	9.30	a.m.	21	5.8	.23	20.67	79.1	.12	20.69	79.2	.11	15	.05	3.7	38.5	169	15	.348	.058	2.5	6.0	14.4	16%	Slightly brown
Tues...	Aug.	9	3.30	p.m.	23.5	5.9	.24	20.76	79.0	.17	20.73	79.1	.07	15	0.2	5 5	45.0	.....	19	.....	.....	0.2	6.0	13.6	16%	Becomi'g browner
Wed	Aug.	10	9.30	a.m.	21	5.8	.24	20.56	79.2	.18	20.62	79.2	.06	15	.75	5 4	46.0	176	18	.360	.065	0.1	5.8	13.6	16%	Darker brown
Wed....	Aug.	10	3.30	p.m.	23	5.8	.26	20.64	79.1	.14	20.76	79.1	.12	16	Trace	4.8	55.0	190	16	.....	.....	3.5	5.9	13.8	17%	Darker brown
Thurs...	Aug.	11	9.20	a.m.	21	5.7	.26	20.56	79 2	.19	20.71	79.1	.07	15	Trace	3.7	56.0	157	19	....	....	3.6	6.1	14.1	17%	Darker brown
Thurs...	Aug.	11	3 30	p m	22	5 8	....	.....	.....	....	.....	.....	....	15	Trace	6.5	67.0	.....	.....	....	.....	1.4	6.2	14 0	17%	Darker brown

Total Nitrogen in the sample is 5.6%. Total Nitrogen in the Effluent is 4%.

From the experimental data submitted, it may be said in conclusion that the carbonaceous matter is apparently oxidized more easily than the nitrogenous. The variation of percentage of CO_2 and O_2 in the air before passing into the sewage and after is relatively small, and becomes smaller as the volume of air is increased.



The nitrogen undergoes but little change. More important, however, is the fact that the presence of activated sludge, while it may aid in clarification, does not accelerate oxidation of raw sewage. Finally it is interesting to note that the estimation of dissolved oxygen by Miller's method checks closely with the result obtained when the gas was boiled out, and estimated in a Hempel Gas Burette.

My thanks are due Mr. A.V. Delaporte, chemist in charge of the Experimental Station, and Mr. F. A. Dallyn, head of the Sanitary Engineering Division, Toronto, who supervised this research.

STUDIES IN FLY CONTROL.

By A. E. Berry, M.A.Sc. and C. H. McLeod, B.A.

With a view to studying the effects of measures applied to an entire municipality in the control of house-flies, and other species, which normally frequent dwelling houses and barns, a series of experiments were conducted at Iroquois Falls during the months of June, July and August, 1921. It was not intended primarily to educate the residents as to the manner in which flies spread disease and to recognize their unsanitary habits, but more to take conditions as they were found and determine the most effective means of preventing this annual fly nuisance and with the hope of demonstrating the possibility of banishing the fly from a community. Most work undertaken by individuals as a means of keeping down the flies has been aimed at the destruction of the adults. While this undoubtedly has some beneficial effects, these flies have probably laid their eggs and thus given rise to a great many ready to take the place of the one killed. In these experiments it was aimed to prevent the development of the fly to the adult stage by destroying the larvæ in the breeding grounds. The advantage of this method lies in the fact that the larvæ do not move about as do the adults, and it is, therefore, more effective to apply control measures at this stage than on the adult fly.

In many of the northern towns of Ontario, especially where lumbering or paper-making is in progress, large numbers of horses are required. The manure from these stables does not as a rule receive much attention, and thereby creates a very favourable breeding ground for house-flies. During the summer months, with a shortage of labour, there is little time available for removal of the manure, and as farming is not very extensive in these areas, there is little or no demand for fertilizers. This condition, together with the very hot summer climate, makes the control of the flies a problem to be reckoned with.

Iroquois Falls is a northern town of recent growth, in which great pride is taken in maintaining surroundings somewhat superior and more beautiful than that found in the average northern municipality. It owes its development to the paper-making industry, and the residents find employment in one of the largest paper mills in the country. The company management was progressive, and ready to adopt any methods designed to further the interests of the town. For these reasons it was considered a most favourable location for demonstrating means whereby flies might be eliminated.

Sanitary Survey.

Prior to the application of any control measures it was essential that an exact knowledge be had of all places which might serve either as breeding grounds or food supply to the adult fly. With this in view, a sanitary survey was made of the entire townsite and all adjoining property. This included a visit to every house and building. All unsanitary conditions were noted and periodic inspections made at later dates to ascertain if flies were breeding there or feeding on the refuse. This method not only indicated the points where treatment was required, but it showed conclusively the type of breeding grounds and food most sought for by the different species of flies.

The survey revealed some conditions very commendable to the town, in that sewerage facilities, water supply and garbage collection were available to practically every residence. Householders were provided with covered garbage cans, and collections were made from these about twice a week, while the garbage from the hotel, cookhouse, and stores was removed on an average of twice per day, and destroyed by incineration. Such conditions cannot fail to have a distinct bearing on the control of the fly nuisance, and an improvement in the general health of the community. Despite the use of these sanitary conveniences it was evident, from the large majority of houses screened, that the town was accustomed to having large numbers of flies each summer. The citizens' evident desire to stamp out the flies was manifested in the attempts made to keep them from their houses. The number of flies which can, however, be destroyed by measures confined to the individual house is small in comparison to the numbers which daily hatch in unsupervised breeding grounds.

In spite of the excellent sanitary conditions prevailing at large, there were some conditions, partly temporary, which bore an important relation to the fly nuisance. The big demand for houses occasioned by the increasing number of workmen required for the production of newsprint during the later years of the war, necessitated the construction of temporary frame houses unprovided with modern sanitary conveniences. Several such houses have in addition been constructed just outside the corporation boundary. These dwellings all have outside privies entirely open to flies, which not only breed there, but migrate to food and homes located in other parts of the town. The direct supervision of such buildings did not in the main rest with the municipal authorities. Several were found on the railway property near buildings occupied by train crews and other employees, while several others were outside the boundaries of the town and were in a position to augment the fly nuisance. All temporary houses within the town are to be removed as soon as sufficient permanent dwellings can be erected. When this has been carried out the town will be in an extremely favourable position in regard to general house sanitation.

The company horse stables were frame structures with canvas covering and it was quite impossible to darken them sufficiently to keep out flies. The large numbers of horses required in the paper-making industry and for work in the townsite presented a serious problem in fly control work. Flies normally became so numerous and troublesome that it was impossible for the horses to get proper rest. All the manure was dumped in piles outside the doors and made excellent breeding grounds for flies. In addition to the horse stables, there was the dairy supplying milk to the town; and the manure from here was drawn away at certain periods, but during most of the hot weather it was left in the yard outside the stable. The horses were kept in the stable at feeding hours and at night, while the cows were in at milking periods only.

The breeding grounds at Iroquois Falls of the various flies may be summed up under the following heads:—

(a) Outdoor privies, totalling 32 in number.

(b) The dairy, with 6 horses and 35 cows.

(c) Horse stables, with an average of 35 to 40 horses.

The flies were not only attracted to the privies and the stables, but there were places throughout the town where they gathered for food. These were mainly the garbage boxes outside the hotel, cookhouse, and butcher shop. The

bins supplied for these places were not large enough or provided with tight covers and it was therefore impossible to have them fly-proof. While eggs were laid, and larvæ hatched in these boxes, the garbage was burned before the adult fly could appear.

Types of Flies Found.

The species and prevalence of flies found at Iroquois Falls resulted from the types of breeding grounds available. The common house-flies (*musca domestica*) were most numerous. They were widely scattered throughout the town, and in the houses. It was evident that they were breeding almost entirely in the manure piles at the stables. Some were found around the privies, but appeared to be there more for food than to lay their eggs. Eggs and larvæ were found in the garbage boxes, but they were not permitted to reach the adult stage.

The blow-flies, including the blue-bottles and green-bottles, were very numerous, and the residents stated they were more troublesome than the others. This was probably due, not to an excess of numbers over the house-flies, for they take longer to develop, but to their greater size and the rapidity with which they destroy meat left exposed. It would appear that they lay eggs on meat almost as soon as they feed, and larvæ hatched from these, rapidly spoil it. This was no doubt the case in the butcher shop, where meat was frequently returned by the customers, and in addition the butchers were forced to throw away large amounts. This was also in spite of the fact that the meat shop was entirely screened and with sliding doors opened only to pass parcels to purchasers. These blow-flies became very troublesome in the houses in the fall, where they went in search of warmth. In the summer they were scattered over the municipality feeding upon refuse from the houses, and especially attracted to the garbage boxes, whenever meat was present.

The blow-flies naturally prefer meat for food, and on which to lay their eggs, but in this locality the eggs laid on meat did not have an opportunity to develop. It has been stated by entomologists that they would breed to a certain extent in the contents of privies. An examination of these indicated that enormous numbers were being developed here to spread over the entire town. In some privies the contents appeared as a moving mass of larvæ. The blow-flies did not frequent the stables, and it seemed improbable that they were breeding to any extent in places other than the privies.

In addition to the house-flies and blow-flies, a number of other types in smaller numbers were found especially around the dairy where suitable breeding grounds were available. The biting house flies were numerous around the cattle. They followed the cows to pasture during the day, and on entering the stable at milking hours found suitable material in which to deposit their eggs. They were very troublesome to the cows and it was found necessary to use fly-ease solutions for temporary relief.

Other types of flies found included the small house-fly (*fannia canicularis*), the bots, stable flies, dung flies, etc., but these were not so numerous as the other species.

To appreciate the nature of fly control work, it is necessary to first of all understand the life history and characteristics of the flies to be dealt with. They have different breeding preferences, different life cycles, require different foods, and have varying means of transferring disease organisms.

Description and History of Types Found.

The House or Typhoid Fly.

This is the type most commonly found around houses, almost wherever habitation exists. It appears with the advent of warm weather and remains active until the approach of cold weather in the fall. Several other species are often mistaken for this, but on careful examination it can usually be identified by the decided elbow appearance of the third vein in the wing. It is a medium sized fly, measuring about a quarter of an inch in length, and is a dark grey colour.

The sense of smell seems to be highly developed in the fly, for it is attracted from long distances to food or refuse possessing an odour. It feeds on decaying refuse such as garbage, manure, excreta, and any food or wastes found around dwellings. The method of taking in this food is interesting in that the head is equipped with sucking mouthparts which cannot pierce the skin or bite, as is often supposed. Liquid food is readily taken up by the fly, but when dry materials are encountered an additional procedure is necessary. In this case the fly regurgitates a great deal of saliva or liquid food which breaks up the solid particles into a form which will readily pass through the mouthparts. This method is responsible for the presence of a large portion of the specks found on windows and exposed surfaces.

The development of the fly takes place in three stages: The egg, the larva and the pupa. The female fly lays her eggs in the most suitable material available. This may include garbage, privies, or animal excreta, while horse manure is preferred, but only when fresh and moist. The eggs are deposited in groups just under the surface of the manure. The average number laid at one time ranges from 120 to 150 and a fly may lay as many as three or more of these clusters during her lifetime. These eggs are easily seen with the naked eye. This stage will last during hot weather, from eight to twelve hours, and the larva will then appear as a small white maggot. The larva stage requires about four or five days for development in warm weather. During this period the larvæ are very active and crawl rapidly through the manure when disturbed. The majority feed within the top six inches, but are quite sensitive to direct light or exposure to the air. Where each day's manure is placed on top of the preceding supply the larvæ tend to work down to the lower margin and break up the manure into fine particles. All feeding and growth takes place in the maggot stage, the end of which may be recognized by the appearance of a yellow color due to the presence of fat cells. Before pupation, the larvæ tend to migrate to a dry part of the breeding grounds. If the manure is placed on the ground they will usually crawl into the top layer of the soil or seek the bottom edge of the pile.

At the end of the maggot stage a reddish brown case forms on the larva and it is then known as a pupa. This period may last four or five days in summer, and is entirely a resting stage. No food is taken and it therefore cannot be poisoned. At the termination of the pupal stage the end of this case is broken off and a full grown, adult fly emerges. Its wings are damp and must be dried before flight can be made. The young fly is hungry after such a long resting period, and goes at once in search of food.

It was originally estimated that the fly did not reach maturity until about two weeks after leaving the pupa, but recent experiments seem to indicate that in midsummer the female is ready to deposit eggs at the end of three or four days after reaching the adult stage. This accounts for the rapid increase in numbers during the summer.

Blow-Flies.

The majority of blow-flies are larger than the house-fly and have bright, metallic, blue-black or green bodies. They are also equipped with sucking mouth parts, and prefer fresh meat as food. They are very prevalent in some localities around privies and garbage boxes.

The eggs of the blow-flies are not laid in horse manure, but on fresh, decaying or cooked meats, dead animals, human excrement or garbage. They are deposited in masses of as many as 300, and these develop into larvæ in from ten to twenty-four hours. The life cycle is somewhat similar to that of the house-fly, but the period of development is longer and requires about three weeks in summer.

The Biting House-Fly (stomoxy: calcitrans).

This fly greatly resembles the common house-fly and it is difficult without a close observation to differentiate between the two, but their habits are entirely different. The biting fly is not commonly found around the houses, but prefers the stables where it can attack the cattle and horses. It differs from the typhoid fly in that it has biting mouthparts which are used to suck blood from animals. It breeds in manure, human excrement, and moist straw. The eggs are laid in an irregular heap of about sixty. The development from egg to adult is slower than the house-fly, and requires from twenty-five days to a considerably longer period.

This fly appears to grow more active just before a rainstorm and attacks animals with great vigour. Its close resemblance to house-flies has often given rise to the belief that the latter bite at certain times.

THE TRANSFERENCE OF DISEASE BY FLIES.

Flies are a common agency in the spread of infectious diseases. They have two methods of transferring the germs from the excreta and waste of sick persons to the food of others: first, by carrying the germs on the exterior of the body. The bodies of all these flies are provided with short hairs or bristles. In feeding, or walking over infectious material the germs are collected on these hairs, and thus carried to whatever food the fly may find exposed. Second, by conveying the germs in their digestive tract. This latter means of carrying disease germs is by way of the alimentary canal of the fly. These germs may be sucked up by the fly and carried to other points where later they may be regurgitated with the saliva required to dissolve other food. Many in this way are left behind and taken into the stomach of persons eating such food. It has, moreover, been found that many germs may pass through the alimentary canal of the fly and still retain their virulence when deposited as specks. It is possible that protozoa may be introduced into the blood by means of the biting house flies.

How Flies Pass the Winter.

The prevailing belief that flies pass the winter months by remaining in a dormant condition behind pictures and in crevices of the walls appears to be erroneous in the light of recent experiments. The life of the adult fly is normally short, and there is no reliable evidence to prove that it will live all winter. It is now considered that the supply is kept from extinction during the cold weather, either by the larvæ and pupa existing in manure, or the continued breeding of the adult in quarters unaffected by unfavourable weather. The presence of larvæ and pupa in the manure piles during the winter and their emergence as adult flies in early spring, appears to be the most reasonable explanation as to their means of escaping the winter.

Experiments Conducted.

The control measures attempted at Iroquois Falls may be divided into two classes as follows:—

(a) Experiments on the blow-flies.

(b) Experiments on the house and stable-flies.

It was during the latter part of June, when work was started and flies of all types were prevalent in fairly large numbers. The blow-flies appeared to be slightly more common than the others, due probably to their hardier nature or to the fact that the house-flies had not left the stables to any great extent at that time.

It was essential that some method be used for estimating the effect of control measures on the number of flies at different points from time to time. An accurate estimate of this is difficult to procure, but a method quite useful for comparative purposes was adopted and consisted in setting fly-traps at definite points for fixed periods. The flies caught in each trap were counted after they had been killed by five minutes' exposure to the fumes of burning sulphur in an inverted barrel. Under similar conditions the numbers caught gave a very fair means of comparing the prevalence of the flies at different periods. Of course adverse weather conditions decreased the counts materially, but the weather was mostly uniform and slight variations did not greatly affect the comparison. It was not intended that the traps should serve as a means of extermination, but of course they had a limited effect. It is evident from the results, however, that trapping alone is not sufficient. While the traps were in use and before successful measures were found to destroy the larvæ, the flies in the town became more numerous.

In considering the results from the various methods applied, it must be borne in mind that the weather plays an important part in the numbers found in a district. The summer of 1921 was exceedingly hot at Iroquois Falls, and this served to materially hasten the development in the different stages over that required under average weather conditions. The eggs were hatched and developed into adult flies in the shortest possible time and very little weather sufficiently adverse to produce inactivity of the fly was experienced. Under such conditions it is apparent that had no methods been applied for the control of the fly, the numbers would have greatly surpassed those of other years.

The various methods tried out as a means of destroying the larvæ are as follows:—

THE BLOW-FLIES.

Fortunately the first methods adopted for the destruction of these larvæ were a success. It seemed certain from the sanitary survey that the privies were responsible for the presence of the blow-flies, and the treatment was consequently directed against these. A light coat of chloride of lime was sprinkled every four or five days on the contents of the privies. The amount of bleach required was small, in that subsequent applications required the powder to be applied only on the fresh and exposed feces. No eggs were laid on material to which the bleach had once been applied. An examination of the privy contents on the day following the treatment showed that all the larvæ had been killed. Continued treatment by this method soon reduced the counts found in the traps, and practically eliminated the blow-fly from the town. The disappearance of this fly was the subject of considerable comment by the citizens, who were naturally accustomed to having them increase in numbers as the summer progressed. It was especially noticeable around the cookhouse and butcher shop. The butcher stated he had no trouble whatever in keeping the meat nor did he have any returned after these measures had been in operation for a short while.

Following are given tables showing the number of blow-flies caught at different points in the town. While the reduction in numbers is not entirely uniform, this may be accounted for by the variation in weather conditions and to the fact that before the traps were set large numbers of these flies were scattered throughout the town and it required some time before these could be attracted to those places where the traps were set.

TABLE NO. 1.

Trap set at the cookhouse garbage box for six hours each day, and baited with fresh meat and molasses.

BLOW-FLIES.

Date	Number Caught in Trap	Weather	Remarks
June 25	2600	Fair and warm	
" 27	6600	Very warm	
" 28	5500	" "	
" 29	1300	" "	
" 30	1550	" "	
July 5	1250	Very hot	
" 6	800	Smoky	Smoke kept the flies away.
" 7	2060	Hot	
" 8	2570	Warm	Chloride of lime treatment in privies started.
" 9	1900	Very hot	
" 11	800	Hot	
" 12	1000	Hot and cloudy	
" 13	815	Rain	
" 14	1625	Fine	
" 15	1350	Fine	
" 16	3050	Cloudy, with rain	
" 18	2000	Changeable	
" 19		Heavy rain	
" 20	742	Fine	Heavy rain July 19th.
" 21	95	Warm	
" 22	962	Hot wind blowing from village of Jacinto	The green-bottle appeared here where the blue-bottle had been most prevalent before. Believed to be coming from Jacinto, about half a mile away. The effect of treatment should begin to show results at this point.

Date	No. caught in trap	Weather	Remarks
July 23 to 27		Rainy weather	Flies driven away.
July 24	140	Clear and warm	
" 29	755	" " "	
" 30	644	Clear	
Aug. 4	200	Clear and warm	First part of August cool.
" 5	173	" " "	
" 6	200	Cool	
" 9	221	Warm	
" 11	100	Clear and warm	
" 12	75	" " "	
" 13	60	Warm	
" 15	40	Clear and warm	
" 16	85	Warm	
" 17	20	"	
" 18	75	"	
" 19	30	Some rain	
" 20	50	" "	
" 22	25	Warm	

The garbage box of the cookhouse was one of the chief feeding centres for the blow-flies. They were attracted in large numbers by the meat in the box. The counts at the end of August were so small that they were scarcely noticeable at all. Blow-flies are very easily trapped and thereby indicate quite well the numbers present.

TABLE NO. 2.

Trap outside the butcher shop. Set for 48-hour periods and baited with meat and molasses.

Blow-Flies.

Date	Number	Weather	Remarks
June 30	4000	Very warm	
July 2	5050	Very hot	
" 5	6600	Hot	
" 7	6300	Hot	
" 9	4650	Hot	Chlorination treatment begun July 8th.
" 12	1100	Changeable	
" 18	1000	"	
" 20	3900	Warm	
" 22	1900	Hot	Effect of treatment should show here.
" 26	850	Cloudy	
Aug. 3	930	Warm	
" 6	400	Cool	
" 8	270	Changeable	
" 10	210	"	
" 12	170	Warm	
" 15	160	"	
" 17	100	"	
" 19	54	Rain	

TABLE NO. 3.

Trap outside the incinerator set for 48-hour periods and baited with meat and molasses. The flies found here had followed the garbage collected in the town.

Blow-Flies.

Date	Number	Weather	Remarks
June 25	2300	Fair and warm	
" 30	6700	Very hot	
July 2	7350	Hot	
" 4	4000	Hot	Smoke from bush fires.
" 7	4650	Hot	Treatment of privies begun July 8th.

Date	Number	Weather	Remarks
" 9	2600	Hot	
" 12	9400	Hot and cloudy	
" 15	1300	Rain and cloudy	
" 18	5250	Changeable	
" 21	4000	Hot	
" 23	720	Rain	Effect of treatment of privies should show here.
" 25	2250	Changeable	
Aug. 4	640	Warm	
" 6	560	Cool	
" 8	130	Cool	
" 11	300	Warm	
" 13	140	Changeable	
" 15	400		
" 17	80	Warm	
" 19	60	Rain	

TABLE NO. 4.

Trap at the door of the cookhouse, set for 48 hour periods and baited with meat and molasses.

Blow-Flies.

Date	Number	Weather	Remarks
June 30	6300	Very hot	
July 2	10600	" "	
" 4	7000	" "	
" 6	3740	Changeable	
" 8	8000	Hot	Treatment of privies begun July 8th.
" 12	4540	Changeable	
" 14	1150	Rain and cloudy	
" 18	1550	Rain	
" 21	3600	Very hot	
" 23	1280	Rain; cool	Effect of treatment should begin to show here.
" 25	2500	Cloudy	
" 28	2400	Warm	
Aug. 5	1400	Clear	
" 8	1200	Cool	
" 11	700	Warm	
" 13	500	Changeable	
" 15	250	Warm	
" 18	80	Warm	
" 20	40	Rain and warm	

The House and Stable Flies.

The first experiments attempted on the house flies and those breeding in the manure about the stables were not so successful as those on the blow-flies. The measures made use of were those recommended in various text-books and pamphlets, and comprised for the most part stomach poisons, which to be effective must be eaten by the larvae. The poison was either mixed with or sprinkled in solution on the manure. It was found necessary when applied in solution to use from a gallon to a gallon and a half per bushel of manure, depending on the amount of moisture present, to insure that larvae in all parts would be affected. The chief objection to the use of stomach poisons is that the larvae, being very active, will migrate to points other than where the poison has been applied before it has been eaten. Moreover, it is very slow to act and to get results at all the manure should be stored in bins to prevent the escape of the larvae. The methods tried on the manure were as follows:

(1) *Treatment with Hellebore.*

Hellebore in the powdered form is mixed with water at the rate of one-half pound per ten gallons of water. This mixture is allowed to stand twenty-four hours, when it is then ready for sprinkling on the manure. It has been recommended that, applied at the rate of ten gallons to every eight bushels of manure, it would destroy 88 to 99% of the larvæ

The results at Iroquois Falls failed to indicate any such efficiency. The instructions and strength recommended were carried out repeatedly both on manure in piles and in storage, but no destruction of the larvæ could be noticed. Different batches of hellebore and in strengths several times that recommended failed entirely to produce any larvicidal effects.

(2) *Treatment with Powdered Borax.*

The amount recommended in this case was 0.62 pounds per eight bushels of manure or about one pound per sixteen cubic feet of manure. It may be either mixed in the manure as a powder or dissolved in water and sprinkled on. The latter method is preferable. Difficulty is experienced in uniformly mixing so small a quantity of powder in that amount of manure. This larvicide has been estimated to destroy 98 to 99% of the larvæ, and to exert a toxic action on the eggs, thus preventing their hatching.

The experiments carried on with this chemical gave poor results. The strength recommended proved to be entirely inadequate either for killing the larvæ or destroying the eggs. Eggs hatched out even when borax had been applied at the rate of one-half pound per bushel of manure. It was only effective on the larvæ when used in quantities of one pound per bushel of manure kept in storage. Even at this strength it required forty-eight hours to get results, and it would therefore, be entirely useless on manure piles. This amount of borax not only makes the treatment very expensive, but it is said to destroy the fertilizing value of the manure.

(3) *Treatment with Iron Sulphate.*

Mixed with manure at the rate of two pounds per bushel of manure it had no effect on the larvæ, but entirely dried up the manure.

(4) *Treatment with Chloride of Lime.*

Chloride of lime, when used at the rate of four pounds per bushel of manure, was recommended as an effective larvicide. While it gave excellent results in the privies, where the larvæ were unable to crawl away it was not a success on the manure. Where the manure can be thoroughly broken up and stored in barrels or bins it will give fairly good results, but when placed on piles the larvæ are able to crawl away before being harmed, or live in some part where the bleach has not reached.

The use of chloride of lime for sprinkling the floors of horsestables has been advocated, and was tried at Iroquois Falls. If sprinkled on the moist surface of the floor it prevented the flies from feeding there to a certain extent, but this did not seem to be due to the fumes, but more because it dried up the manure. When swept up with the manure it failed to prevent eggs from hatching or to

destroy the larvae. Owing to its disagreeable qualities it is difficult to have employees use it. If used in large quantities on the floors of the stables it may burn the horses or cause injury to their eyes by the fumes.

(5) *Treatment with Kerosene.*

The use of kerosene as a fly larvicide in manure piles has not been widely recommended, owing to the belief that it would be inflammable. When sprinkled on manure at the rate of one-half gallon per bushel and washed down with twice that amount of water it proved to be a very effective means of destroying the larvæ. The action on the larvæ was very rapid and no opportunity for their escape was presented. Under those conditions it was only necessary to treat that part of the pile which contained larvæ. The action was sufficiently rapid to immediately see what larvæ had been touched, and what had been missed.

(6) *Treatment with Lyman's Disinfectant.*

This is a commercial disinfectant and can be had in barrel lots at a considerable reduction in price. Solutions of various strengths were tried, and it was found best to use a 4% solution. It is sprinkled on the manure at the rate of a gallon to a gallon and a half per bushel of manure, and acts very much like kerosene. A 3% solution gave fair results, but it seems advisable to use the stronger. It appears also to destroy the eggs. Manure containing eggs was sprinkled with the solution, and no larvæ developed. It could, therefore, be applied either in the stable or on the manure after it has been removed.

(7) *Treatment with Creonoid.*

This is another commercial preparation, and is recommended chiefly as a fly-case for cattle and horses, when sprayed on at full strength. It was found to be an effective larvicide when applied in a 4% solution similarly to Lyman's Disinfectant. The chief objection to its use is that it does not emulsify in water, but by stirring well it can be fairly evenly applied to the manure.

Other commercial disinfectants tried and which gave good results were as follows:—

4% solution of Creolin
3% solution of Pyxol
4% solution of Carbonol
17% solution of Formaldehyde; the 40% stock solution on the market being considered as of full strength.

A 6% Lysol solution failed to give satisfactory results.

From the results obtained with these solutions it would appear that the majority of commercial disinfectants on the market would be efficient when used in the proper strength. The problem is, then, to find the cheapest disinfectant which will give satisfactory results. By the use of Lyman's Disinfectant or Creonoid, when purchased in barrel lots, the cost would be about three and one-half cents per bushel of manure treated. In view of the fact that these chemicals act so rapidly it is necessary to treat only part of the pile and by this method the cost may be very much reduced. This is especially the case where the manure is piled by means of a litter carrier. Here the larvæ soon work down to the edge.

and leave the rest of the pile free. In considering the cost of this treatment it is well to note that the amount of manure produced in one day by a working horse in the stable at feeding times and at night will be from a bushel to one and one-half bushels, when only a small amount of bedding is used.

Following are given the tables showing the flies caught in the traps.

TABLE NO. 5.

Trap at the Company's lower horse-stable, set for 48-hour periods and baited with molasses. Here the manure is piled outside the doors, and the flies were very numerous. The use of chloride of lime on the floors failed to prevent their development.

House and Stable Flies.

Date	Number Caught	Weather	Remarks
June 27	3800	Very hot	
" 30	3800	" "	
July 4	6500	" "	
" 7	9000	Hot	
" 9	4900	"	
" 12	4900	Changeable	
" 15	3100	"	
" 18	5200	"	
" 21	6500	Hot	
" 25	2900	Warm; rain	
" 28	3700	Hot	
Aug. 4	2000	Warm	
" 6	1550	Cool	
" 8	1000	Cool	
" 10	1200	Changeable	Treatment of manure with disinfectant begun Aug. 3rd. Effect of treatment should show here.
" 13	1000	"	
" 15	1200	Warm	
" 17	800	"	
" 19	500	Rain	

TABLE NO. 6.

Trap at Overflow Stable, set for 48-hour periods.

House and Stable Flies.

Date	Number Caught	Weather	Remarks
July 22	2720	Changeable	
" 25	9300	Warm; cloudy	
" 28	6400	Hot	
Aug. 4	3000	Warm	
" 6	1800	Cool	
" 8	820	Changeable	
" 11	940	Warm	Treatment with disinfectants begun Aug. 3rd. Effect of treatment should show here.
" 13	500	Changeable	
" 15	300	Warm	
" 17	250	Warm	
" 19	270	Rain	

TABLE NO. 7. DAIRY—TRAP A.

Set for 48-hour periods and baited with molasses. The small flies here were able to crawl out through the wire screening and this gave irregular counts until finer wire was substituted.

HOUSE AND STABLE FLIES.

Date	Number Caught	Weather	Remarks
June 27	2700	Very warm	
July 2	1270	Very hot	
" 6	4450	Hot	
" 9	16900	Very hot	
" 11	5100	Hot	
" 14	8600	Fine	
" 16	3100	Rain	
" 18	7500	Changeable	
" 23	4400	"	
" 25	2650	"	
" 28	12800	Hot	Treatment of manure with disinfectants begun.
" 30	5350	Changeable	
Aug. 3	3200	"	Effect of treatment should show here.
" 5	3650	"	Fine wire used in traps.
" 8	2600	Fair	
" 11	5700	Warm	
" 14	4000	Changeable	
" 17	3000	Warm	
" 19	670	Rain	

TABLE NO. 8.

Trap at Incinerator—48-hour periods.

HOUSE AND STABLE FLIES.

Date	Number Caught	Weather	Remarks
June 25	100	Warm	Nearly all flies caught were blow-flies at this time.
" 30	350	Very hot	
July 2	3160	Very hot	
" 4	100	Very hot	Smoky weather.
" 7	2000	Hot	
" 9	1750	Very hot	
" 12	6300	Hot	
" 15	900	Changeable	
" 18	3500	Changeable	
" 21	9400	Very hot	
" 23	1680	Changeable	
" 25	5250	Warm, cloudy	
Aug. 4	2560	Warm	Treatment of all manure with disinfectants begun.
" 6	2240	Cool	
" 8	1170	Fair	
" 11	700	Warm	
" 13	560	Changeable	Effect of treatment should show here.
" 15	1600	Warm	
" 17	720	Warm	
" 19	560	Rain	

This trap was baited for both blow-flies and house-flies, which followed the garbage collected throughout the town. The blow-flies at first were predominant, but were replaced later by the house-flies. Since these were drawn from the breeding grounds in various parts of the townsite, it was not expected to get results from the treatment as soon as at the stables. The table indicates that a reduction in the number of flies in the town was apparent.

Destruction of Larvæ by Fowl.

Where hens are allowed to scratch through the manure pile daily they will destroy the great majority of the larvæ. This was the case at the horse stable near the incinerator. Four horses were kept here and the manure was piled outside the door. Flies following the garbage to the incinerator found this centre a very convenient place for laying their eggs. The eggs hatched into larvæ, and were quite numerous when the stables were cleaned, but after the fowl had scratched over it, larvæ could seldom be found.

Storage and Removal of Manure.

In Iroquois Falls it was not convenient to either store the manure or remove it at frequent intervals. It was found here that the majority of the eggs were laid before the manure was taken from the stable. Where conditions permit of the placing of manure in fly-tight bins before the flies have had an opportunity to deposit their eggs, satisfaction should result from such storage, but this can be accomplished only where there is an attendant constantly looking after the stables. The flies prefer fresh manure both for food and breeding grounds. If the eggs have been laid in the stable the development is not affected by storage in bins. The larvæ of the fly are not destroyed in this way.

It is common practice in many localities to have manure removed every ten days during the summer months. This period in itself may be of sufficient duration to produce the adult fly, or if the manure has been piled on the ground it will give the larvæ time to reach the pupa stage and crawl into the clay to later emerge as an adult. Even if the larvæ are drawn away with manure and placed in piles at some distance from buildings or spread on the land the growth to the adult stage will still proceed and the young fly will very early return to the nearest centre where food is available. The removal and spreading of manure on the land during the winter should destroy all larvæ and pupa which have hatched from eggs deposited in the fall, and whose development has been retarded owing to unfavourable climatic conditions.

Maggot Traps.

Maggot or larvæ traps have been recommended as a means of destroying larvæ in manure without the use of poisons, or other chemicals. A rack consisting of crosspieces spaced ½" to 1" apart is placed about one foot above a tank of water. The water need only be four or five inches deep. Manure fresh from the stable is placed on the rack, and watered daily. Advantage is taken of the fact that larvæ, prior to pupation, have a tendency to migrate to the edges of the pile in search of a dry area in which to pass the resting stage. The daily application of water is intended to increase the fermentation of the manure and make the centre of the pile less attractive to the larvæ. The trap works on the principle that the larvæ in search of a dry spot will go too far from the manure and fall into the water below.

Experiments on such a device were carried out at Iroquois Falls. In the first test it was found that larvæ were changing into pupa on the upper surfaces of the crosspieces. To avoid this the wooden frame was substituted by a wire netting and the deficiency in this respect was then overcome.

The results obtained indicated an estimated efficiency of 15%. It was found that while the larvae tend to crawl to the edge of the pile they are very sensitive to direct light and absence of cover, with the result that great masses of them formed into pupa at the edge of the pile. The application of water each day to the manure makes it more attractive to the fly about to deposit her eggs, and this means an increased period during which the manure must stay in place. The water sprinkled on the trap appeared to form channels through the manure and thus leave part of the pile quite dry. Since the manure from one horse in the stable at feeding time and at night will average from a bushel to one and one-half bushels per day, when only a small amount of bedding is used, it is evident that a larva trap for the average sized stable would require a very large area, and considerable expense. It seems essential that the manure should stay in place for at least ten days and probably longer.

No difficulty is encountered in keeping the larvæ under water. They seem unable to crawl when submerged, but they will live there for a long time, and will come to life if left in the air, even though they may appear dead when removed from the water.

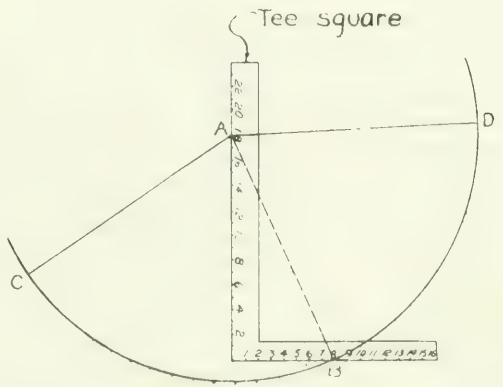
The use of a maggot trap for a stable with only one or two horses may be satisfactory for the reduction in the number of flies, but it will not eliminate the nuisance to the same extent as the application of chemicals to the manure. The area required for its use and the attention which should be given it will often make it more troublesome than other methods which give greater efficiency.

To Free a House from Flies.

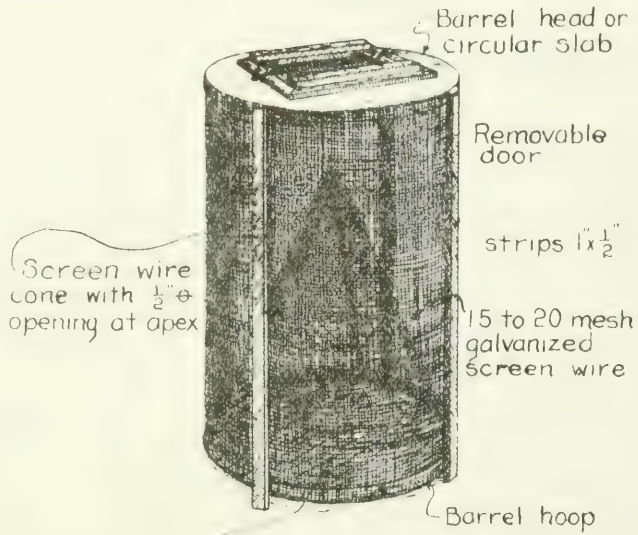
Where flies are numerous in a district and it is impossible to prevent their entrance into the houses there are several methods commonly employed against them. These should be considered only as secondary remedies, and special attention should be given the breeding grounds. These methods include poisons, sticky paper, traps, swatters, fumigation, brooms, etc. Fly-papers and swatters are useful when the number is not large. Poisons are quite serviceable except that the objection is raised to having dead flies drop into food and utensils. A cheap and effective poison is made by adding three teaspoonfuls of Formaldehyde (obtained at any drug store) to a pint of water or equal parts of milk and water. This is placed about the room in shallow dishes with a piece of bread in the centre for the flies to alight and feed. This poison kills quite rapidly and may be effective before the fly gets very far from the dish. If the flies are merely to be driven out of the room this can be accomplished by making a brush or broom of pieces of paper or cloth and driving them out through an open door.

Where a room can be well closed up the flies can often be killed by burning sulphur. This method is successfully used at some of the meat packing houses against the blow-flies. All flies should be swept up and burnt directly this is over, for some may only be stunned and will rapidly revive when placed in fresh air. The objection to sulphur is that it may have an injurious effect on the contents of the room, especially on fabrics and metals. The amount of sulphur necessary will depend upon the size of the room and the possibility of escape of the fumes around the doors and windows. The amount required for average conditions will vary from one to two pounds per 1000 cu. ft. of space. The fumigation should last for three or four hours if possible.

CONICAL FLY TRAP



Pattern for construction of cone


Barrel head or circular slab
Removable door
strips 1"x½"
Screen wire cone with ½" opening at apex
15 to 20 mesh galvanized screen wire
Barrel hoop
Bait placed under cone

Fly Traps.

Fly-traps are valuable as an auxiliary means for combating the fly-nuisance, but they are not to be relied upon as a complete method for keeping down the numbers. It has been suggested that traps, properly baited, and set by the breeding-grounds, could be used as the entire means of abating the nuisance, but this does not seem to work out well. Too many flies escape the traps, especially when other sources of food are nearby, to warrant the use of traps alone.

To get the greatest efficiency from fly traps they must be baited properly and set in the most convenient locality. Most measures against the adult flies are used about dwellings, and not where the eggs are laid. Flies caught in this way have quite likely deposited their eggs and left a swarm of progeny to follow them to the houses. The best place to set traps is undoubtedly at the manure piles, in order that the young flies may be caught before any eggs have been deposited.

The bait required for these traps will depend upon the kinds of flies in the vicinity. Blow-flies are strongly attracted by fresh meat, while molasses mixed with water seems most suitable for the house-flies. The bait should be given attention every day and the trap set in a warm, bright location. These traps are often ineffective in a house, because these conditions are not fulfilled.

It is generally recognized that the trap most suitable is that of the conical shape in which the bait is placed at the bottom, and the flies crawl upwards through a small opening at the point of the cone. This can readily be made at home at a very moderate expense by following these instructions.

A Home Made Fly-Trap.

The following instructions are given for those who desire to make one of these fly-traps at home.

The trap consists essentially of a screen cylinder with a frame made of a barrel head and hoops, in the bottom of which is inserted a screen cone. Convenient measurements for the trap are:—height of cylinder 24 inches; diameter 12 to 18 inches; height of cone 18 to 20 inches and diameter at the base the same as that of the cylinder. The material necessary for this trap consists of one new or second-hand wooden barrel hoop, one barrel head or round board $\frac{3}{4}$" thick for the top, four laths for sides, a few feet of strips 1 to 1 $\frac{1}{2}$ inches wide by one-half inch thick (portions of old boxes will be suitable), 10 to 12 mesh galvanized screening (18 mesh wire is required for a trap for small flies), 24 inches wide for the sides of the trap, an ounce of carpet tacks, and two turn buttons which can be made of pieces of wood. The cost of material for this trap is not great and in many cases the barrel hoops, laths and strips can be obtained without expense. Two yards of screen wire will be sufficient for a trap 12 inches in diameter.

To Make the Trap.

In constructing the trap the hoop is bent in a circle (outside diameter equal to the size of the trap required) and nailed together, the ends being trimmed to give a close fit. This forms the bottom of the frame. The top, made of a barrel head or board cut to form a circle is held together by thin strips nailed on the under side. An opening for removal of the dead flies is cut in the centre of the top, and a door fitted to this. The door consists of a narrow frame covered with

a screen, well-fitted to the trap and held in place by buttons. A sufficient length of screen wire to reach around the top of the trap with an inch or two for overlapping is then cut and tacked to the top of the frame. The cone is next made and the dimensions of the wire for this is most easily obtained by first cutting out from paper a cone of proper size.

To form the paper cone draw an arc of a circle CD (as in the accompanying diagram) of radius equal to the length of the side of the cone AB. To find this length AB measure off on the arms of a T square lengths equivalent to the height of the cone and to the radius of the base. Join these two points A and B with a string the length of which is the radius of the cone. Draw on a sheet of paper an arc of a circle with radius AB. On this arc measure off, using short lengths, a distance CD equivalent to the inner circumference of the barrel hoop used for base. For a 12 inch hoop this distance is 38 inches plus 1½ inches overlap for joining the two edges. For a 16 inch hoop it is 50 inches. Draw lines joining C to A and D to A. Sufficient width for overlapping the edges should be left either along the side of CA or AD. Using this paper cone as a pattern the wire cone can readily be cut out and the sides wired together. A small opening is then cut in the top of the cone to allow the flies to pass through. The base of the screen cone is tacked to the inside of the hoop. Next join the edges of the wire on the cylinder of the trap. This can readily be done by lacing with a fine wire. The next procedure is to insert the cone in the cylinder of the trap and tack the bottom edges of the screen wire to the outside of the hoop. The trap is then made firm by nailing four laths or strips to the top and bottom frames. In order to give the flies sufficient room to enter under the trap the laths should extend about one inch below the bottom frame.

Summary.

The experiments conducted at Iroquois Falls indicated that a municipality need not be troubled with the yearly fly nuisance. The blow-flies in this municipality were reduced in numbers to such an extent that they might be considered as entirely eliminated. This was accomplished by merely preventing their development in the privies and trapping those which had got beyond the larva stage before the treatment was begun. Such treatment is not only applicable to Iroquois Falls, but may be used with equal success in any municipality. The search for a suitable larvicide to use on the manure piles gave the house and stable flies an opportunity to greatly increase in numbers. When the application of disinfectants to the manure was in progress a reduction in the counts took place, and would no doubt have shown up to greater advantage had it been possible to continue the experiments longer. It cannot be said that these low counts were due to weather conditions, for in camps nearby the flies were in greatest numbers when these reductions occurred at Iroquois Falls. Where the traps were set indoors, particularly at the Dairy, the cooler weather would have a tendency to drive the flies indoors and thus increase the numbers caught in the traps.

The use of disinfectants as larvicides is quite reasonable in cost, and a very simple means of control. The stock solutions do not occupy much space, and it requires no technical skill for their application. The benefits from the elimination of the fly nuisance is well worth the expense involved, not only from the decrease in the danger of disease, but economically as well. The saving of meat

is surely worth more than the cost of chloride of lime required for the privies. The increased rest which will result for the horses is no small consideration, and the possibility of saving food supplies, together with the general comforts to be had from the absence of flies, must be fully considered in estimating the cost of such preventive measures.

Much of the success of the experiments carried on at Iroquois Falls was due to the excellent co-operation and assistance received from the local Board of Health and the company officials, who were at all times willing and ready to aid in any way possible. The citizens, too, were always ready to make possible the proper working of the methods, under investigation. By adopting the methods found successful in these experiments it is quite possible to gain absolute control of the annual summer fly nuisance.

INVESTIGATIONS IN THE SANITATION OF SWIMMING POOLS.

By A. V. Delaporte, B.A.Sc.

The unsatisfactory situation with respect to the control of public and private swimming pools was forcibly brought to the attention of the Division of Sanitary Engineering during the past year. The investigation herein reported upon arose from repeated requests of parents and others interested for information as to the condition of certain pools, and for instruction as to how the present unsatisfactory situation might be corrected.

Pools receive constant pollution during bathing periods by mucous, mouth rinsing, expectorant and body pollution from every bather and from bathing suits, where bathing suits are permitted, which are not properly sterilized. Shower baths, as taken by bathers, are not altogether effective, particularly in cleansing the perineal regions. Few of the officials at the pools make any investigation in the medical history of the bathers. This means that the dissemination of disease is controlled entirely by—(1) The shower bath before bathing; (2) By purification of the water in the pools; and as has already been observed, the shower baths are ineffectual. Therefore, the main controlling factor is the purification of the water.

The diseases which may be communicable through the agency of swimming pools are divided into three classes, namely, intestinal, eye and ear, and venereal. To this there should be added a fourth class, namely, respiratory. (Manheim, Parks, Public Health and Hygiene.)

The investigation of conditions for the purpose of this report was confined to four pools. Two of the tanks—"A" and "B" were almost identical in equipment. They had white tile floors, draining to a gutter, a trough around the tank to carry away splash, expectorant, etc. The water was continuously recirculating through pressure mechanical filters, and chlorinated with bleaching powder.

Tank "C" was in a municipal bath house. It was of concrete, with a gutter, but no trough. The water was changed every week. The only purification of the water was chlorination by the addition of bleaching powder.

TABLE NO. 1

BACTERIOLOGICAL ANALYSES

Swimming Pools — Tank A.

Date	Hour Collected	Bacterial Counts on Nutrient Agar: 48 Hours Count 18°-22°C .01cc	.10cc	Count per CC	24 Hours Count, 37° C .01cc	.10cc	Count per CC	Colon Bacilli 48 Hours at 37° C: .1cc	1cc	5cc	10cc	25cc	50cc	No. of Bathers	Remarks
	P.M														
1921															
Dec. 12	7.30		62			25 Spr.		+	+					0	First day after fresh supply in tank. No chlorine yet.
	7.45		240			90 Spr.			+	+				1	
	8.00		40			70 Spr.		+	+					0	
	8.45		208			100		+	+					36	
	9.00		200			310			+	+				7	
	9.15		240			40 Spr.			+	+				6	
	9.30		120			50 Spr.		+	+					16	
	9.45		65			30 Spr.		+	+					20	
Dec. 19	7.30		1			4								8	Res. Cl. at 4.30 p.m. .09 p.p.m.
	7.45		2			1 Spr.								25	
	8.00		3			2								4	
	8.15		12			8								12	at 9.30 p.m. .06 p.p.m.
	8.30		14			48			+	+				27	
	8.45		10			2								15	
	9.00		17			42					+			12	
	9.15		23			36					+			8	
	9.30		60			140				+	+			11	
Dec. 28	7.30		0			11					+	+		56	
	7.45		0			12						—	+		Res. Cl.
	8.00		0			5						—	+	2	at 11.20 a.m. .10 p.p.m.
	8.15		0			10 Spr.				+	+				
	8.30		0			0				+	+			5	
	8.45		0			2				+	+			10	
			0			8						—	+		West side.
			0			0				+	+				South side.
	9.00		0			3				+	+			5	
	9.15		0			3					+	+		4	

| | | |

Tank "D" belonged to a woman's physical culture school. It was built of concrete—had no gutter or trough. The water was changed every two days, and chlorinated with bleaching powder.

The bathers in all the pools were required to take shower baths before entering the pool. In the case of tank "D" this was quite ineffectual. The showers were exposed to the pool; there was a male swimming instructor, and the bathers took their shower baths in their bathing suits. There was no sterilization of the bathing suits. No bathing suits were allowed in tanks "A," "B" and "C."

Samples were secured from the pools before bathing commenced, and every fifteen minutes during the bathing period, except in the case of "D." The observations were made at times calculated to give a maximum of pollution. In every instance where the treatment was at all effectual, the pools were practically sterile before the bathing commenced. After bathing commenced the bacterial pollution in some instances reached as high as 10,000 colonies per c.c. at 37°C. with 1000 B.Coli per 100c.c. The tanks operated on the fill and draw plan were not appreciably worse than those continuously re-circulated and filtered.

The authorities at tank "A" kindly consented to permit our observations over a period of time. One of our objects was to see the maximum time the water in the pool could be maintained in good physical condition, as well as sterile. This pool was troubled with an algae growth in summer weather, and experiments to control this growth were also made.

An attempt was made to get a series of bacterial results with the water containing graduated amounts of free chlorine. This was difficult, because the amount of organic impurities varied greatly from day to day, and it was impossible to control the excess of free chlorine.

The bacterial results are by no means uniform, due probably to the variation in numbers and cleanliness of the bathers. It is significant that the bacterial counts at blood temperature are generally greater than the bacterial counts at 18°C. The work showed that, to have a sterile water throughout the bathing period it was necessary to have a large enough excess of free chlorine to show a residual chlorine after the bathing was over. In tank "A" it was found that, if the residual chlorine in the pool before bathing commenced was in excess of 0.2 p.p.m., the water in the pool would remain practically sterile throughout the bathing period.

The water in tank "A" is re-filtered continuously through pressure mechanical filters. Theoretically, the entire volume of water in the tank was passed through the filters in something less than a day. The filters are depended upon for clarification only. The engineer in charge of the pool could re-filter the water continuously for about three months, adding a small amount of water daily to make up for wastage. *Then filtration became ineffective, and the water in the pool became cloudy. This occurred when the alkalinity of the water was exhausted, due to the continuous addition of alum used in the filtration apparatus.* To prevent this condition arising, washing soda was added to the pool when the alkalinity was reduced to 20 p.p.m. This rendered it possible to retain the water in the pool until the time of writing, a period of about ten months. The water is as clear and sterile as the day the tank was filled.

TABLE NO. 2.

BACTERIOLOGICAL ANALYSES

Swimming Pools. Tank B.

Date	Hour collected	Bacterial Counts on Nutrient Agar						Colon Bacilli 48 Hours at 37° C						No. of Bathers	Remarks
		48 Hours Count 18 - 22° C			24 Hours Count, 37° C										
				Count per cc			Count per cc	.1cc	1cc	5cc	10cc	25cc	50cc		
	P.M.	.01cc	.1cc		.01cc	.1cc									
1921															
Dec. 8.	6.15	500			1				+	+					
	6.30	1			3				+	+					
	6.45	0			1					+	+				
	7.00	0			0					+	+				
	7.15	2			1					+	+				
	7.30	0			1					+	+				
	7.45	150			1					+	+				
	8.00	0			3			+	+						
	8.15	0			0				+	+					
	8.30	1,000			2				+	+					
	8.45	0			2					+	+				
	9.00	110			0				+	+					
	9.15	5			1				+	+					
	9.30	60			1					+	+				
	9.35	0			2 Spr.				+	+					Effluent from Pool
		0			1				+	+					
Dec. 12.	7.45			6			24		+	+					
	8.00		....	9			12			+	+				
	8.15		....	1			24			+	+				
	8.30		..	2			3			+	+				
	8.45			5			1		+	+					
	9.00			15			6			+	+				
	9.15			2			4	+	+						
	9.30			6			1			+	+				
	9.45			16			2		+	+					

TABLE NO. 3

BACTERIOLOGICAL ANALYSES

Swimming Pools — Tank C

	Hour collected	Bacterial Counts						Colon Bacilli 18 Hours at 37°C								Number of Bathers	Remarks
		18 Hours Count 18 -22°C			24 Hours Count, 37°C												
	P.M.	.01cc	.10cc	Count per cc	.01cc	.10cc	Count per cc	.001cc	.01cc	.1cc	1cc	5cc	10cc	25cc	50cc		
1921																	
Dec. 21	2.00		0			8						—					Residual Cl. .04 p.p.m.
	2.15		5			6 Spr.						—	—				
	2.30		1			1						—	—				
	2.30		22			2 Spr.						—	—				North end of pool.
	2.30		2			Spr.						—	—				South end of pool
Dec. 28	2.15		0			0							+	+			
	2.30		0			1						+	+				Res. Cl. .048. p.p.m.
	2.45		0			2						—	+				
	2.45		0			3									—		
	2.45		0			1							—	+			South End of pool Middle of pool.
Dec. 31			0			3							+	+			Shallow end. Res. Cl. .02 p.p.m.
Saturday afternoon			0			2								+	+		Shallow end
			0			0								+	+		Deep end
			0			2								+	+		Deep end

TABLE NO. 4

BACTERIOLOGICAL ANALYSES

Swimming Pools — Tank D.

Date	Hour collected	Bacterial Counts: 48 Hours Count 18° -22° C .01cc	48 Hours Count 18° -22° C .10cc	48 Hours Count 18° -22° C Count per CC	24 Hours Count 37° C .01cc	24 Hours Count 37° C .10cc	24 Hours Count 37° C Count per CC	Colon Bacilli 48 Hours at 37° C .001cc	Colon Bacilli .01cc	Colon Bacilli 1cc	Colon Bacilli 5cc	Colon Bacilli 10cc	Colon Bacilli 25cc	Colon Bacilli 50cc	No. of Bathers	Remarks
	P.M.															
1922																
Mar. 21	3.45			110 Spr.			1,000						+	+		
				40			1,500					+	+			
				80 Spr.			70 Spr.					+	+			
				60 Spr.			110 Spr.				+	+				
												+	+			
Mar. 22			170			1,000						+	+			
	9.45		80			70						+	+			
			100			200				+	+					
			250			300					+	+				
			90			210						+	+			
Mar 23			350			300					+	+				
	9.00		60 Spr.			200 Spr.				+	+					

TABLE NO. 5

BACTERIOLOGICAL ANALYSES

SUMMARY

Swimming Pools — Tank A

P.P.M. Residual C1. Before Bathing	B. Coli Per 100cc.			Bacteria per cc. on nutrient agar.					
				at 18-22° C			at 37° C		
	Ave.	Max.	Min.	Ave.	Max.	Min.	Ave.	Max.	Min.
0.0	787	1,000	100	1,436	2.400	400	887	3,100	300
0.08	6	20	0	0.5	3	0	42	200	3
0.09	15	100	0	158	60	1	140	310	0
0.10	13	20	10	0	0	0	5 .7	14	8
0.13	39	100	4	16	35	12	20	42	2
0.14	1	4	0	0.2	2	0	1 .6	7	0
0.15	21	100	2	4.5	9	0	27	72	0
0.2	0	0	0	0	0	0	0	0	3

This table shows the averages of 10 and 15 minute samples taken during the maximum bathing period per week. The wide variation is due to the variation in the number of bathers using the pool during the bathing period.

To overcome the algae growths, copper sulphate was added to the pool, after bathing was over Saturday night. The precipitated copper was removed by the filters before bathing commenced Monday, removing the remotest possibility of poisoning from this source. Analyses of the water showed that not a trace of copper was left in solution.

Tank "D" was identical with tank "A" in equipment. The treatment, however, varied in the amounts of alum and chlorine added. There was some doubt among the officials about the advisability of increasing the dosage of chlorine to a point where it would be effectual. When the dosage was increased to 0.2 p.p.m., it was as effective as in tank "A."

Tanks "C" and "D" were dependent on disinfection by bleaching powder only. The operation of the pools was haphazard, and the attendants unwilling to follow directions. This is clearly shown by the bacterial results. Tank "D" was in bad condition, and should really not be permitted to operate without making some radical changes in control.

The sanitary chemical analysis of samples from the various tanks showed that, in tanks "A" and "B," the filtration was preventing any noticeable increment in the organic matter in the water. Tanks "C" and "D" operated on a fill and draw basis and showed a comparatively heavy pollution. This heavy pollution in the tanks without filters necessitates a heavier dosage with chlorine in order to leave sufficient residual chlorine to safeguard the bathers.

These four tanks are situated in a municipality where they are under constant supervision of a vigilant local Board of Health. Conditions in pools, not so favourably situated have not yet been investigated.

TABLE NO. 6

CHEMICAL ANALYSES

Swimming Pools — Tank A

Serial No.	Date 1921	PARTS PER MILLION												
		Solids			Nitrogen					Oxygen consumed	Chlorine	Oxygen Dissolved	Temp.	
		Total	Diss.	Susp.	Free Ammonia	Alb. Ammonia	Res. Cl.	Nitrites	Nitrates					
1	December 12	153	140	13	.32	.5	nil	Trace	nil	1.13	14	7.2	25	C
2	December 12	135	126	9	.46	.42	nil	Trace	nil	1.07	14	7.3	25	
3	December 19	167	124	43	.88	.38	.09	.1	nil	.9	20	5.9	25°	
4	December 19	163	124	39	.84	.52	.09	.1	nil	1.2	20	5.9	25°	
5	December 28	175	160	15	.52	.16	.1	3.0	1.0	1.07	22	5.6	25	
6	December 28	185	180	5	.60	.16	.1	3.0	.8	.86	22	5.7	25	
	1922													
7	January 1	207	180	27	.22	.48	.09	1.0	1.0	1.3	24	1.3	24.7	
8	January 17	141	130	11	.38	.26	.15	3.0	.2	2.08	26	7.0	25.5	
9	January 24	183	160	23	.32	.36	.07	.05	1.5	1.04	27.5	6.7	24.5	
10	February 1	141	130	11	.30	.28	.14	Trace	.3	1.74	30	6.8	24.5	
11	February 8	164	150	14	.40	.21	.10	nil	.7	2.3	33.5	5.7	25.0	
12	February 16	213	192	21	1.28	.88	nil	0.8	1.5	1.16	31.5	1.8	29	
13	February 28	118	206	12	1.01	.88	.4	nil	.7	.116	31.5	5.1	26	

TABLE NO. 8

CHEMICAL ANALYSES

Swimming Pools — Tank B

Serial No.	Date 1922	PARTS PER MILLION											
		Solids			Nitrogen					Oxygen Consumed	Chlorine	Oxygen Dissolved	Temp.
		Total	Diss.	Susp.	Free Ammonia	Alb. Ammonia	Res. Cl.	Nitrites	Nitrates				
C.Y.	March 28	208.4 Loss 74.8	201.5	6.9	.65	.36	0.18	nil	2.0	.81	18.0	5.5	25.5° C

Remarks:—36.96 p.p.m. Alk. to M.O. 4.48 acid to Phenolphthalein.

TABLE NO. 9.

CHEMICAL ANALYSES

Swimming Pools — Tank C

	Oxygen Consumed	Free Alk.	Alb. Amn.	Nitrites	Nitrates	Cl.	Dissolved Oxygen	Temp.
Dec. 21	1.06	.84	.16	nil	nil	20	5.9	23°C
Dec. 28	1.07	.2	.2	nil	.06	18	6.	
Dec. 31	1.6			.5	nil	21	8.7	

TABLE NO 10

CHEMICAL ANALYSES

wimming Pools — Tank D

Serial No.	Date	PARTS PER MILLION											
		Solids			Nitrogen					Oxygen Consumed	Chlorine	Oxygen Dissolved	Temp.
		Total	Diss.	Susp.	Free Ammonia	Alb. Ammonia	Res. Cl.	Nitrites	Nitrates				
M.E.	1922	155.6											
M.E.1	March 21	Loss 38.8% 170	145.8	9.8	.286	.56	nil	Trace	0.1	6.96	15.0	5.0	29.0° C
M.E.2	March 28	Loss 80.4	166.8	3.2	.22	.12	0.15	nil	0.3	1.97	17.0	5.0	29.0°

TABLE NO. 7

MINERAL ANALYSES

Swimming Pools — Tank A

Serial No.	Date	Total Solids	SiO_2	Al_2O_3 Fe_2O_3	Ca O	Mg O	Na_2O + K_2O	Cl	Alkalinity due to BiCarbonates
	1921								
1	December 12	153 Loss 63	1	8.0	58	15.4	4	14	54.5
2	December 12	135 Loss 51	1	4.0	40	10.4	4	14	48.1
3	December 19	167 Loss 64	nil	1.2	45	13	3	20	43.7
4	December 19	163 Loss 64	nil	1.0	44	14	3	20	48.1
5	December 28	175 Loss 56	nil	6.0	48	16	5	22	36.0
6	December 28	185 Loss 66	nil	6.0	49	15	4	22	41.0
	1922								
7	January 4	207 Loss 102	nil	10.0	46	16.1	4.5	24	43.7
8	January 17	141 Loss 37	nil	6.0	57	12	8	26	24.9
9	January 24	183 Loss 74	nil	8.0	59	12	6	27.5	52.5
10	February 1	141 Loss 59	nil	7.0	56	10	10	30	25.4
11	February 8	164 Loss 75	nil	6.0	61	12	5	33.5	38.7
12	February 16	213 Loss 58	nil	5.0	40	21.5	5.5	31.5	38.7
13	February 28	218 Loss 83	nil	3.0	78	8.3	9.0	37.5	44.

With the evidence in hand it would seem advisable to make an extended investigation, so that the situation throughout the Province could be gradually brought to public attention.

It is recommended that:—

(1) The management of all swimming pools be required to use sufficient free chlorine in the water of the pool so that there shall at all times be residual free chlorine present. With the colorless waters of old Ontario 12 to 14 pounds of bleaching powder per million gallons of water daily would ordinarily be sufficient.

(2) In pools where bathing suits are worn, the suits to be sterilized after use, and bathers required to take a shower while nude, before entering the pool. (It might be advisable to specially treat the water used for showers with chlorine.)

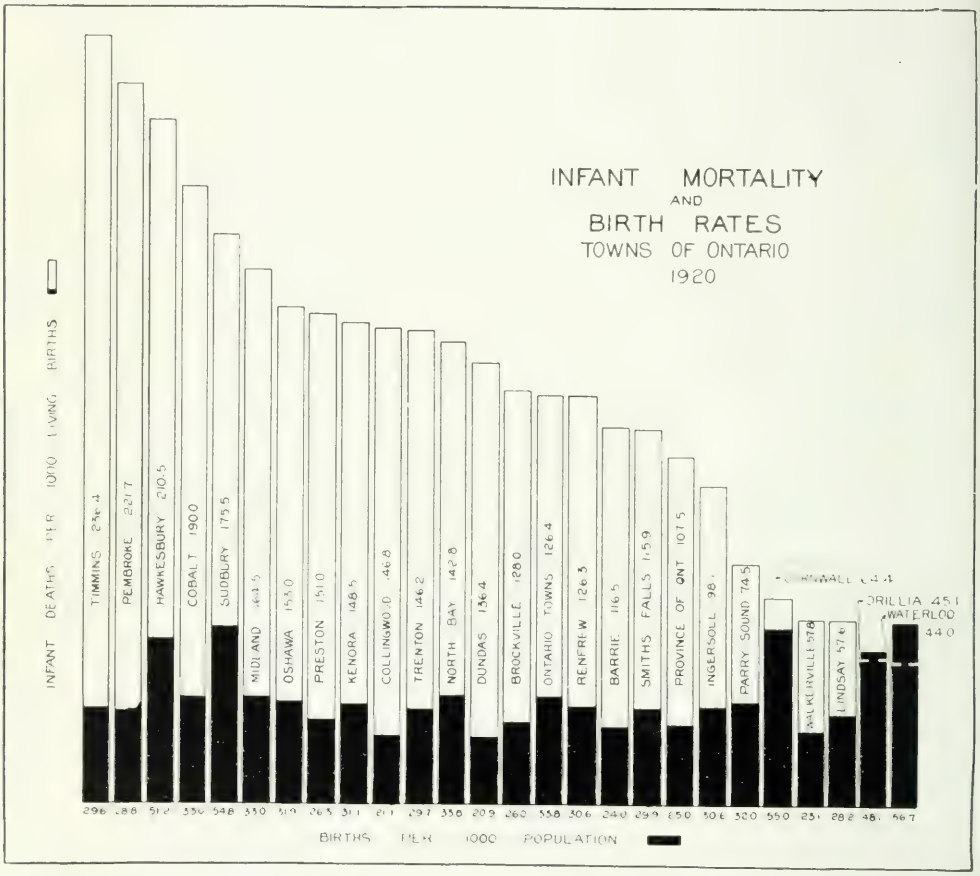
(3) All new pools to be required to have proper gutters, troughs and drainage.

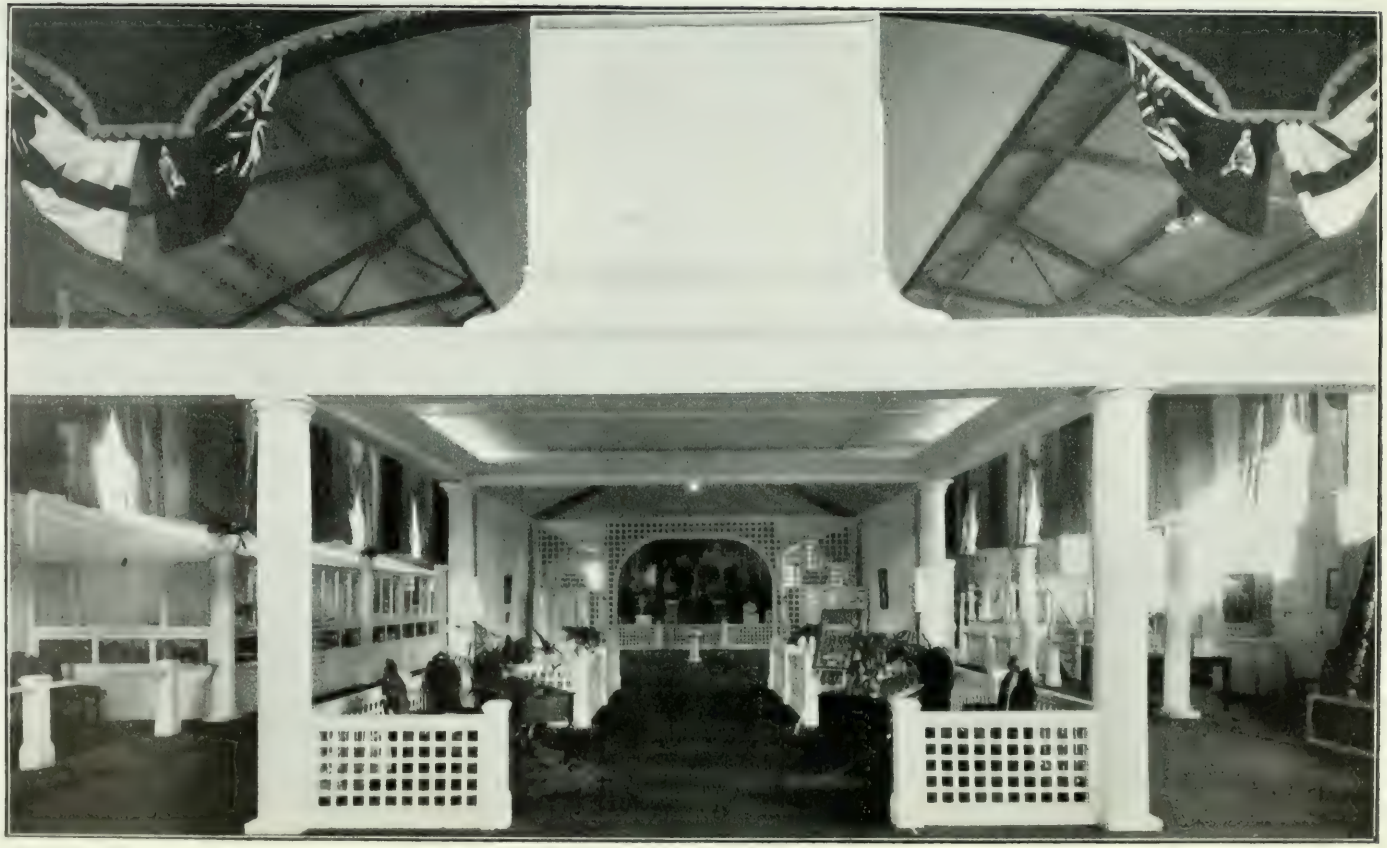
INFANT MORTALITY AND BIRTH RATES CITIES OF ONTARIO 1920

INFANT DEATHS PER 1000 LIVING BIRTHS

BIRTHS PER 1000 POPULATION

FORT WILLIAM	169.6	34.0
OTTAWA	167.0	30.2
WELLAND	149.4	28.9
PORT ARTHUR	137.4	34.9
SAULT STE. MARIE	130.0	29.0
BELLEVILLE	124.3	31.2
NIAGARA FALLS	123.7	26.7
KINGSTON	118.8	25.2
ONTARIO CITIES	113.2	27.5
WOODSTOCK	110.5	18.4
WINDSOR	110.5	33.3
HAMILTON	110.0	28.5
CHATHAM	107.5	23.1
PROVINCE OF ONT.	107.5	25.0
TORONTO	104.6	26.6
PETERBORO	101.5	23.9
LONDON	100.2	25.8
OWEN SOUND	99.7	23.1
KITCHENER	99.4	25.5
SARNIA	97.5	25.2
BRANTFORD	93.9	25.8
GUELPH	93.7	21.4
ST. CATHARINES	89.3	36.9
ST. THOMAS	86.1	26.7
GALT	73.5	26.0
STRATFORD	68.3	28.2


INFANT MORTALITY
AND
BIRTH RATES
TOWNS OF ONTARIO
1920
INFANT DEATHS PER 1000 LIVING BIRTHS
TIMMINS 234.4
PEMBROKE 221.7
HAWKESBURY 210.5
COBALT 190.0
SUDBURY 175.5
MIDLAND 168.5
OSHAWA 153.0
PRESTON 151.0
KENORA 148.5
COLLINGWOOD 146.8
TRENTON 146.2
NORTH BAY 142.8
DUNDAS 136.4
BROCKVILLE 128.0
ONTARIO TOWNS 126.4
RENFREW 126.3
BARRIE 116.5
SMITHS FALLS 115.9
PROVINCE OF ONT 101.5
INGERSOLL 98.
PARRY SOUND 74.5
ORILLIA 45.1
WATERLOO 44.0
296 288 512 330 548 330 319 265 311 211 297 338 209 260 338 306 240 299 250 306 320 350 251 282 486 567
BIRTHS PER 1000 POPULATION



Canadian National Exhibition, 1921

"The Children's Theatre" Child Welfare Exhibit, 1921

REPORT OF DIVISION MATERNAL AND CHILD WELFARE AND PUBLIC HEALTH NURSING

I have the honour to submit the Annual Report of the Division of Maternal and Child Welfare and Public Health Nursing, for the year 1921.

A detailed account by the Associate Director, Miss B. Knox, covers the work of the public health nurses in the eight Health Districts, together with results following demonstrations or other type of service given by the Division. It is very gratifying to note that nineteen local public health nurses have been appointed either by the municipal councils or local committees, while lack of funds has been the only reason for appointments not being made in seven additional centres.

During the year the activities of the Division have been carried on in twelve cities and twenty-two towns; work was done in farming sections in connection with demonstrations in the following: Manitoulin and St. Joseph's Islands and Townships of Niagara, Tecumseth, Prince, Korah and Tarentorus. Advantage was taken of the summer weather to make a survey of several sections in District No. VII, and special work was undertaken in the agricultural district surrounding Emo.

From this it will be seen that much has been accomplished during 1921 in the way of stimulating local effort to the point of action in employment of public health nurses. We feel, however, the more important aspect of our work has been the stressing of maternal and child hygiene, as part of the health education programme which the nurses have carried to the individuals and the families with which they have come in contact.

Exhibits

At the Canadian National Exhibition the Division contributed its share to the exhibit of the Board. The key-note of our work was "Child Health," no mention being made of disease or death rates. The educational aspect was given full emphasis; the interest centred around the stage, with its outdoor scenery, upon which the programme of the "Children's Theatre" was given at certain intervals. "Happy," the Health Clown, delighted the audiences with his "Act" and little Olive Russell added a novel touch in her recitations of health jingles. The "Mary Gay" plays were greatly enjoyed by the children. A "bottle of milk with a straw," distributed gratis to the boys and girls, was a feature of every afternoon, through the courtesy of the Ontario Milk and Cream Producers' Association.

Clinics were held daily by Dr. Bell, for which purpose the "Child Welfare Special" was used. Some of the children lived in Toronto, and many were visitors from out of town, while not a few took occasion to renew acquaintances begun at the Exhibition Clinic, two or even more years ago.

The Child Welfare Exhibit has been shown upon request in many other centres during the year and a detailed account of this work by Miss K. E. Osborne is appended.

Child Welfare Special

The "Special" began its tour by a visit to Ontario County early in June. During the summer a definite schedule was followed and the communities along the main highway between North Bay and Toronto were visited. In September

the "Special" was taken to Essex County and used in connection with a series of School Fairs: following which it was used in Niagara Township. A portion of Miss Osborne's report is devoted to the "Special."

Conferences

The nurses were called to a general conference in the week immediately preceding the Annual Meeting of the Ontario Health Officers' Association in May, and again in November. This afforded to the District Officers of Health, Public Health Nurses and head office staff, an opportunity to meet together: it has been appreciated by each of the several groups and has proved of real value in discussing the various problems affecting the work of the Division.

Conventions

The Division has a firm belief in the educative value of conventions and has made an earnest effort to divide the opportunities for meeting workers in the child hygiene field among the staff, sending members as delegates to the annual meetings of representative organizations as follows:

Canadian National Association Trained Nurses: Misses Knox, Foy, Osborne.

Graduate Nurses' Association, Ontario: Misses Knox, Foy, Smith and Hamilton.

Ontario Health Officers' Association: Staff.

Canadian Public Health Association: Staff.

Canadian National Child Welfare Association: Miss Power, Miss Gipson.

American Child Hygiene Association: Dr. W. J. Bell, Misses Linton and Carr-Harris.

American Public Health Association: Misses Knox and Foy.

Conclusion

The thanks of the Division are hereby tendered to the Ontario Division of the Canadian Red Cross Society for their splendid contribution to the cause of public health in the Province, by supplying and maintaining eight public health nurses for a period of fifteen months. The results outlined in that portion of the report pertaining to public health nursing service, were made possible by their timely assistance whereby we are enabled to place two nurses instead of one in each of the respective health districts.

To the District Officers of Health we feel we owe a great debt of gratitude for the generous support they have extended to the Division since reorganization, and particularly for the assistance given the nurses on the field, which has been evidenced in many ways.

We wish it were within our power to pay an adequate tribute to the splendid corps of women who form the nursing staff of the Division. Monetary return can never compensate for sacrifices made by them in the spirit of a missionary and pioneer. The improved health of individuals and communities, the gratitude of mothers and the children whose lives they have helped to preserve, will be to them a "monument more lasting than brass."

We desire also to express appreciation of the office staff who have on all occasions maintained their high standard of faithful and efficient service.

Mary Power.

REPORT OF THE ASSOCIATE DIRECTOR.

June of last year saw the beginning of a new life for the Division of Maternal and Child Welfare and Public Health Nursing. It was after careful study and consideration of the problems that were constantly increasing throughout the Province, that the Provincial Board of Health decided it was imperative to include Public Health Nursing in its already extensive programme for the fight against disease, and to increase its efforts to maintain the health of the people, giving special attention to the mother and child. This, it was agreed, could best be accomplished by an intensive system of Public Health Nursing.

The problem was recognized and the treatment decided, but the most difficult part was yet to come, the selection and training of the nurses who would undertake this great responsibility. Public Health Nursing in Canada was merely in its infancy, and at that time there were no training centres giving a course such as would be necessary to equip the nurses for their work in the Province; consequently it devolved upon the Provincial Board of Health to arrange for such a course. (For details see Annual Report, 1920).

Following this course, two nurses were appointed to each of the eight Health Districts. Eight nurses were appointed by the Board and eight additional nurses were supplied by the Ontario Division of the Red Cross. These nurses were to all intents and purposes members of the Provincial Staff, but the maintenance and salary was paid by the Red Cross.

The activities of the Division are:

Pre-natal
Post-natal
Infant
Pre-school
School
Communicable disease, including tuberculosis
Bedside Nursing
In epidemics.
In emergency
Nursing instruction—Bedside care is given to instruct those in the home to care for the patient under the supervision of the nurse.

The duty of a Provincial Public Health Nurse is to demonstrate the need for a public health nurse in any community, by

(1) Teaching health in the
Homes
Clinics
Schools
(2) Discovering symptoms of disease and physical defect.
(3) Reporting communicable disease.
(4) Reporting unsanitary conditions.
(5) Endeavouring to bring to the attention of the municipal authorities the findings brought forward by the demonstration.

Between October, 1920, and December, 1921, the Provincial Nurses undertook work at the following points.

Woodstock	Following the demonstration a second Victorian Order nurse was appointed.
Ingersoll	Nurse appointed, June, 1921. Lack of funds prevented the municipality from undertaking the responsibility of the nurse's salary. A committee of men and women agreed to carry the work in the meantime. The work includes the schools.
Chatham	Nurse employed, August, 1921, by the local Red Cross Society, but later lack of funds prevented the continuance of the service.
St. Thomas	Nurse employed, September, 1921 by the local Red Cross, but service later discontinued.
Galt	Permanent nurse appointed by the local Board of Health, November, 1920.
Guelph	Local Red Cross proposed to appoint a nurse but owing to lack of co-operation from the council and lack of funds found the proposition impossible.
Owen Sound	Permanent nurse employed, May, 1921, under the Local Board of Health. Venereal disease included in the work.
St. Marys	Permanent nurse employed under the Local Board of Health, July, 1921. Includes school work.
Walkerton	No appointment made.
Kitchener	Permanent nurse appointed under the Local Board of Health, August, 1921.
Stratford	Permanent nurse appointed under the Local Board of Health, September, 1921.
Collingwood	Permanent nurse employed, October, 1921, under the Local Board of Health. Includes school work.
Newmarket	Nurse apointed March, 1921, under the Local Board of Health, but service discontinued after three months owing to lack of funds.
Dundas	Second Victorian Order Nurse appointed.
Niagara Township	No appointment made.
Niagara Falls	Nurse appointed under the Local Board of Health, July 1, 1921.
St. Catharines	Local Board of Health had previously appointed a permanent public health nurse but child welfare clinics had not been organized. Upon request, our nurse assisted in the establishment of this service.
Welland	Nurse appointed under the Local Board of Health, June 1, 1921.
Thorold	Permanent nurse employed under the Local Board of Health. Four industries are included in the scheme.
Barrie	Nurse appointed under Local Committee, August, 1921, but later the service was discontinued owing to lack of funds.
Orillia	Nurse appointed under Local Committee, March 1, 1921.
Beeton and Township Tottenham and Alliston	No appointment made owing to lack of funds.

Peterborough	Survey of Health Activities.
Rockland	No appointment made owing to lack of funds.
Smith's Falls.	No appointment made.
Timmins	Permanent nurse appointed under the Local Board of Health, January, 1921.
Sturgeon Falls	Permanent nurse appointed under the Local Board of Health, September, 1921.
Sudbury	Nurse employed by local Committee, but service discontinued later.
Kenora	No appointment made. Lack of funds.
Emo and District	Special work during summer.
Surveys of: –	Jack Fish, Dyment, Rossport, Sioux Lookout, Dorion, Ignace, Keewatin, Jellicoe, Oxdrift, Rainy River, Dryden.
Sault Ste. Marie	Local Board of Health had previously appointed a permanent public health nurse but child welfare clinics had not been organized. Upon request, our nurse assisted in the establishment of this service.
Thessalon	No appointment made owing to lack of funds.
Webbwood	
Blind River	Permanent nurse appointed under the local Board of Health, October, 1921.
Manitoulin Island	
St. Joseph's Island	
Survey.	Algoma Central Railway, Sault Ste. Marie, to Hearst, Tps. Prince, Korah and Tarentorus.

Summary

Some idea of the work accomplished during this time is gained through the following summary.

Total visits	25,389
Organization	8,907
Instructive	14,970
Nursing	1,512
Total Cases	11,552
Pre-natal	767
Post-natal	430
Infant	3,827
Pre-school	2,541
School age	2,222
Medical Adult	149
" Child	696
Surgical Adult	171
" Child	205
Meetings attended	380
Pre-school clinics held: 390, with an attendance of	6,961

(Routine procedure in the holding of Child Welfare Clinics is that Dr. W. J. Bell conducts the first clinic in each centre of demonstration upon request and with co-operation of the local physicians.)

Schools. In the summary given below each Health District is represented by figures from a selected centre in which school work formed part of the nurse's demonstration programme. The nurse undertakes inspection of the school children only upon request of the local school board.

School Findings	I	II	III	IV	V	VI	VII	VIII	Total
No. of Complete Physical Examinations	73	542	601	198	38	..	..	291	1,743
No. with defective vision	55	110	1	81	..	..	..	..	247
" defective hearing	17	19	114	11	..	..	..	..	161
" eye disease	14	..	..	..	..	..	..	..	14
" ear disease	3	4	23	2	5	..	..	..	37
" defective nasal breathing	97	23	..	4	4	..	..	..	128
" abnormal tonsils	267	163	199	23	19	212	140	56	1,079
" anæmic appearance	58	17	1	75	..	..	..	..	151
" defective teeth	381	316	551	2	14	325	206	179	1,974
" digestive abnormality	..	..	..	3	..	..	..	..	3
" enlarged glands	229	16	34	12	16	..	..	10	317
" skin disease	5	..	2	..	4	22	21	4	58
orthopedic defect	3	..	3	4	..	..	..	1	11
" malnutrition	133	..	145	49	..	..	..	..	327
" pulmonary disease	..	..	3	..	..	..	..	..	3
" cardiac disease	..	..	6	18	2	..	..	1	27
" nervous disorders	..	..	4	5	..	..	..	..	9
	1,262	668	1,086	289	64	559	367	257	4,546
SUMMARY									
No. examined by doctor	73	542	601	198	38	..	..	291	1,743
No. defects found	253	668	1,086	275	64	..	..	251	2,597
No. inspected by nurse	545	..	..	24	..	699	1,397	..	2,665
No. suspected defects noted	1,009	..	..	14	..	559	367	..	1,949
Class Room Talks	..	14	..	6	..	..	43	..	63
Visits following Inspections	..	274	..	26	..	290	78	145	813
Referred to Physician	..	454	..	125	..	..	..	..	579
Defects Corrected	20	141	..	5	..	..	..	..	166

In conclusion I may say that the splendid co-operation of the staff, their devotion to duty under conditions and surroundings (which are to say the least, unenviable in many instances) and their loyalty to the Division has made the work, with its results, possible during the year. Too much cannot be said regarding the work of the Ontario Provincial Board of Health Nurses who are doing such efficient work, not only in the cities and towns, but in the remote rural districts where the inhabitants are so isolated that they have never been more than five miles from home. The hardships which are their daily portion are met with determination and steadfast purpose to carry their message of health to every part of the Province of Ontario.

B. KNOX.

REPORT OF NURSE IN CHARGE OF CLINICS AND EXHIBITS.

The organization of the Division included an appointment to cover Exhibit and Special Demonstration work.

Clinics combined with Exhibits were held in the following places:

Preston—In May, 1920, upon the request of the local Victorian Order of Nurses, we went to Preston with a small Child Welfare Exhibit, which was set up in the local theatre. Our Moving Pictures were a feature. We are glad to report that following our visit regular Well Baby Clinics were established.

London—Once again the Division was glad to meet the request of the Child Welfare Association in the celebration of their annual Baby Week in May.

North Bay—In June, under the auspices of the Local Council of Women an Exhibit and Clinics were held in the Town Hall at North Bay. Three successful clinics were made possible by the generous assistance given by the local doctors and dentists.

The advertising and canvassing were done by the ladies of the Council, who were also responsible for supplying volunteers for the clerical work in connection with the clinics.

On two evenings Health Pictures were shown to interested audiences.

The splendid organization and the real interest shown augurs well for the future of child welfare work in North Bay.

Sudbury—A Child Welfare Clinic and Exhibit was held in Sudbury in the Town Hall under the auspices of the Local Council of Women.

With the kind assistance of Dr. W. E. George and voluntary helpers many mothers were given an opportunity to have their children weighed, measured and examined.

Moving pictures on health subjects were shown to about 1,200 school children.

St. Catharines—An Exhibit was held in the Y.M.C.A. Hall in St. Catharines, under the auspices of the Local Council of Women.

Woodstock—In September the Local Council of Women of Woodstock invited the Division to bring their Exhibit and conduct a three-day clinic to be held in Grey Memorial Hall.

All babies were weighed, measured and examined and on the third day prizes were awarded.

The medical profession of Woodstock were very interested in the work and helped materially in making it a success.

The clinics were presided over as follows:

First day—Dr. D. McIlwraith, Hamilton.

Second day—Drs. W. J. Tillman and J. C. Lindsay, London.

Third day—Dr. Alan Brown, Toronto.

Of special interest on the programme were addresses on Prenatal Care by Dr. H. W. Hill, London, and on Child Hygiene by Dr. Alan Brown, Toronto.

Beeton—In December, a Child Welfare Exhibit and Clinic was held in Beeton under the auspices of the Women's Institute, following a talk given to them on the work of the Division.

In spite of December snow the clinic was well attended.

In the evening moving pictures on health subjects were shown to an interested audience.

Windsor—During the week of the Pure Food and Electric Show in Windsor, an exhibit covering Public Health in general was shown.

Burlington—In January, 1921, exhibit and moving pictures were taken to Burlington upon request of the local Board of V.O.N. to assist in the opening of their first Child Welfare Clinic. Dr. Mullin and Dr Clark, of Hamilton, were present and addressed the mothers.

Sulphide—In August we went to Sulphide, upon the request of the Community Nurse. Excellent work is being done, and although the programme is generalized Public Health Nursing, Child Hygiene has been given due attention and a very high standard is being maintained.

The number of children brought by the parents for examination was 88.

Lucknow—In October the exhibit was taken to Lucknow, upon the request of the local Women's Institute.

Demonstration of bathing and dressing a baby was given to the many interested mothers who attended.

Pembroke—One of the outstanding features of our exhibit work this year was the Health Week held in November under the auspices of the local Council of Women.

In the splendid room provided by the Committee, the exhibit was shown to the very best advantage.

This Health Week presented many features of special interest from an educational viewpoint, and an earnest endeavor was made to reach all classes in the Community. A demonstration of bathing and dressing a baby was given to a class of young girls. The pupil nurses of both hospitals were given an address on pre-natal care by Dr. Bell. Our moving pictures on Health Subjects were also a feature.

"Child Welfare Special."

In June, 1921, the "Child Welfare Special" made its first tour in the Province.

In general, the plan was to bring the Child Welfare Conference to the mothers and children in the country districts.

The schedule followed is listed below, together with the result of the examinations:

	Children Examined.	Number Defects Found.
Port Perry	5	14
Brooklin	26	67
Powassan	24	56
Trout Creek	16	40
South River	19	52
Sundridge	16	56
Burk's Falls	16	53
Bracebridge	3	14
Gravenhurst	30	41
Severn Bridge	9	29
Atherly	7	22
Huntsville	17	48
Beaverton	6	19
Queensville	16	16
Aurora	16	15
Thornhill	11	19
Stouffville	23	40
Claremont	21	47
Uxbridge	34	48

"Child Welfare Special."

The "Special" was also used at the Toronto Exhibition for clinic purposes, and then taken to the following Essex County School Fairs:

	Children Examined.	Number Defects Found.
Harrow	16	16
Malden	24	17
Gesto	14	25
Essex	29	14
Cottam	19	25

At the request of the Provincial Public Health Nurse in Niagara Peninsula, the "Special" visited that District, and Clinics were held as follows:

	Children Examined.	Number Defects Found.
St. David's	17	21
Niagara-on-the-Lake	20	23
Queenston	13	10

Respectfully submitted.

KATHERINE E. OSBORNE, *R.N.*

MATERNAL MORTALITY.*

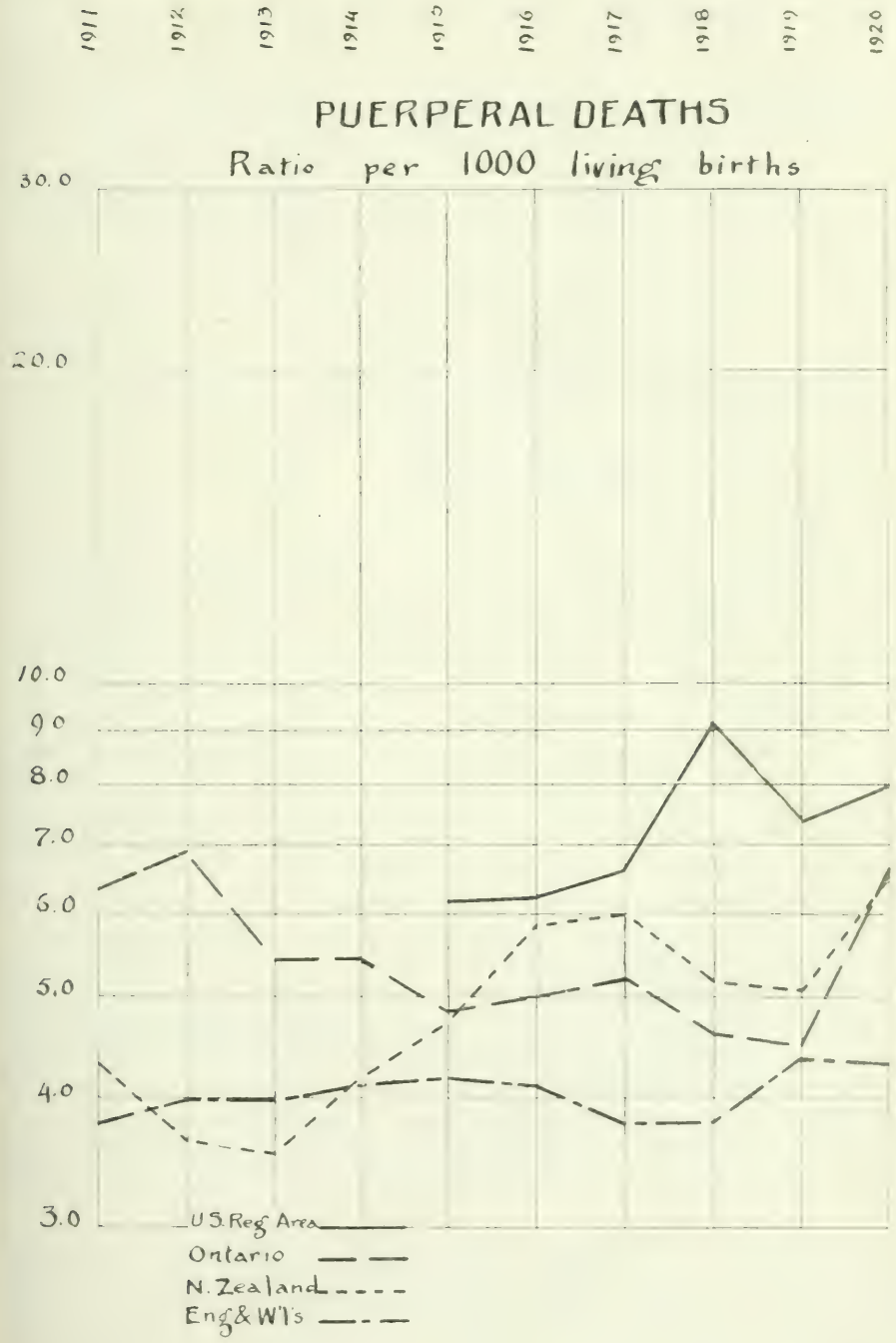
W. J. Bell, M.B.

The subject of Maternal Mortality has in the past received a great deal of attention, but in spite of the fact that much has been written on the subject and frequent discussions have taken place as to its causes, our rates do not show the decrease we should like to see. On the other hand they show, if any change, a slight increase. Those of you who have had occasion to investigate statistics of Maternal Mortality know that under the present system of registration it is extremely difficult to obtain these figures; further, that even when the figures are obtained, a considerable error occurs owing to the fact that some physicians prefer to report a death as due to almost any other cause rather than puerperal sepsis or one of the other causes of Maternal Mortality. On our request, the Deputy Registrar General of the Province of Ontario is this year instituting a questionnaire to be submitted to physicians, dealing with the death of every female between the ages of sixteen and forty-nine, to obtain information as to whether pregnancy or parturition was the direct or a contributory cause of the woman's death. This information is to be compiled by itself, so that at the end of the year 1922, we will have much more accurate and detailed information than we have hitherto been in possession of, and this information will be in a condensed and compact form which will permit of a statistical analysis should such be desired. When we consider the subject of maternal mortality alone, we leave out a very important and very closely allied subject, that of maternal morbidity. A considerable number of women escape the mortality list but find a place in the morbidity list.

A prominent gynaecologist has told me that the major portion of the work of the specialist in his line was due to disability following parturition, and the writer of this paper desires that any discussion of maternal mortality which may follow its reading will include, not only maternal mortality but its near neighbor, maternal morbidity. Some of the causes of the two results are identical, so that a part of the discussion of one condition may embody both.

A statistical table is submitted with this paper. It has been compiled for me by the Deputy Registrar General, in which the causes of maternal deaths are grouped according to the international list of the causes of death. The information given in the table is not sufficiently specific to permit of a detailed analysis, but it does show that puerperal septicaemia is still the big factor as a cause of maternal mortality. Out of 189 maternal deaths in the Province, for the year 1920, 151 were due to puerperal septicaemia. The statistics for the Province of Ontario for the ten years—1911 to 1920—inclusive, show a proportion of 6.91 per thousand live births, the highest, occurring in 1912 to 4.52 per thousand live births, the lowest, occurring in 1919, the rate in 1920 going up to 6.75 per thousand. Comparing our Ontario rates for total maternal mortality, with those of England and Wales for the same period we find that the rate in England and Wales is considerably lower, and that it varies less from year to year than does our rate. Their lowest rate occurred in 1918, and it was 3.55 per thousand live births. Their highest rate was in 1919 when the rate was 4.12 per thousand live births. The maternal mortality rate due to sepsis in England and Wales has exceeded ours only once in the past ten years, namely in the year 1919, when their rate for fatal sepsis was 1.76 per thousand live births, as against our rate for that year

*Read at Annual Meeting, American Child Hygiene Association.


1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
PUERPERAL DEATHS
Ratio per 1000 living births
30.0
20.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
U.S. Reg Area
Ontario
N. Zealand
Eng & W'ls

of 1.35 per thousand live births. Over the ten year period their rates for fatal sepsis have been from five-eighths to seven-eighths of our rates for the corresponding years.

When we remember that England has a midwife problem to deal with, we must conclude that it is necessary to look beyond obstetrical attention alone, as the chief cause of maternal mortality and fatal sepsis in maternity cases. Taking Ontario as a whole, albuminuria has been the factor second in importance only to sepsis as a cause of maternal mortality. The rate has shown a steady increase from 1911 to 1920, when it reached the large figure of 122, accounting for almost exactly 25% of maternal deaths for that year. In the City of Toronto, on the other hand, only 14 deaths out of 104 were accounted for by albuminuria. This last statement is significant and will be referred to later.

A specific analysis of the causes of maternal deaths for the year 1920, could be conveniently prepared for only one municipality and one public institution in Ontario, namely the City of Toronto and the Toronto General Hospital, the statistics for the latter being embodied in the former. In the City of Toronto during the year 1920, 104 maternal deaths from all causes occurred. Of these fifty were due to septicaemia—14 to albuminuria—9 to puerperal phlegmasia—18 to haemorrhage—2 to pernicious vomiting—4 to ectopic gestation—3 parturition, accompanied with cardiac complication—2 rupture of the uterus—6 placenta praevia (included in haemorrhage)—2 other accidents of labor. At the Toronto General Hospital 9 deaths occurred from influenza in pregnant women—1 from erysipelas in a pregnant woman, the erysipelas being the primary cause of death—1 from pulmonary tuberculosis in a pregnant woman—3 from eclampsia—2 from rupture of the uterus—1 from placenta praevia—1 from pulmonary embolus—1 from parturition with cardiac complication—1 from post-partum haemorrhage—4 from septicaemia.

I have to state just one more statistical point, viz: In the city of Toronto in the year 1920 there were altogether 13,661 living births. During the same year there were 104 maternal deaths—an average of 7.61 per thousand living births, almost 13% higher than the rate for the province as a whole. I will leave this point for your own consideration and deduction.

A study of the statistics I have summarized shows two points:—

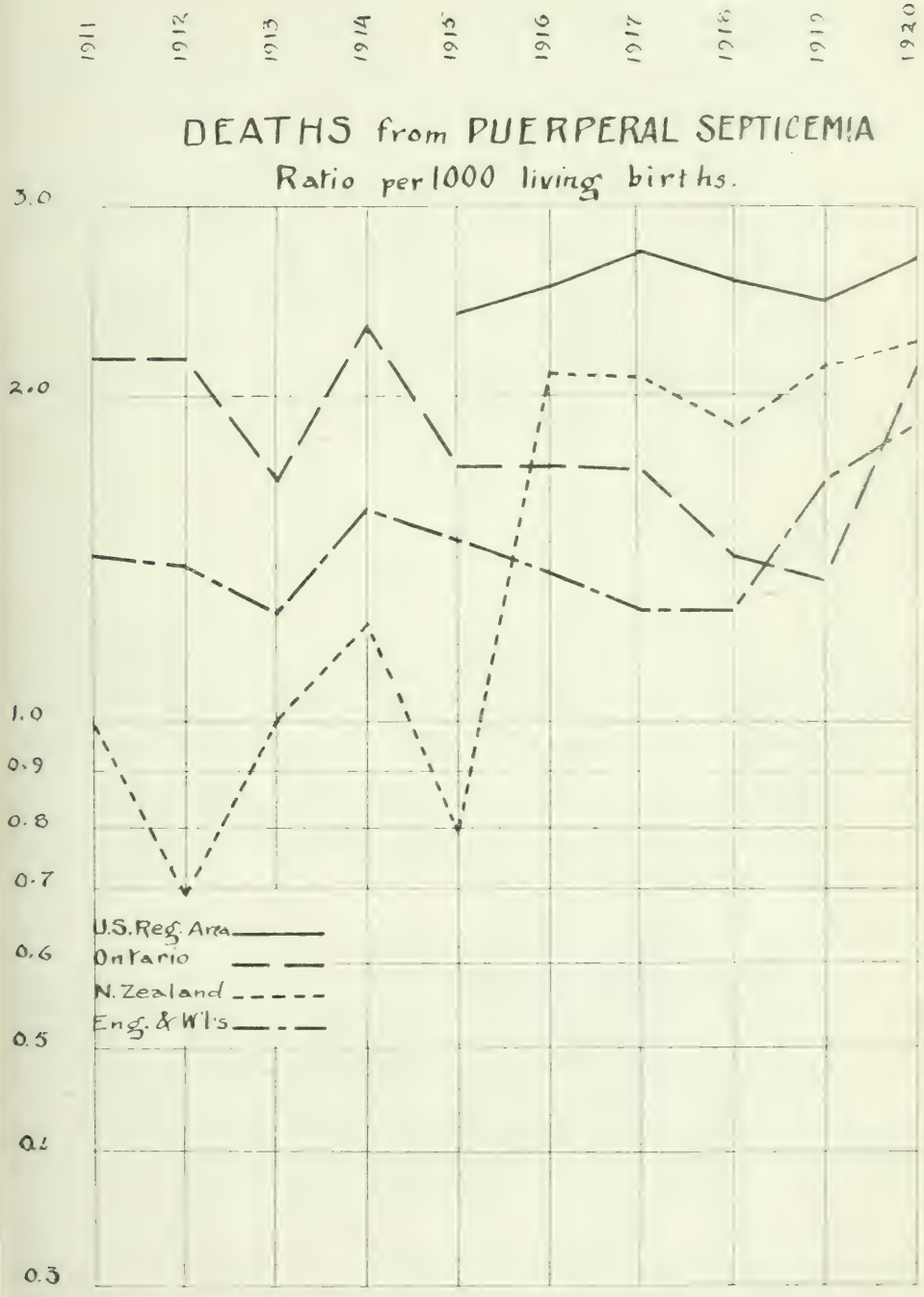
(1) The problem of maternal mortality is a large and serious problem.

(2) It is not being solved.

It would seem that the methods we have been pursuing for years past are not sufficient, that in spite of extensive research and the development of modern methods, we are not progressing, and that more intensive work yet, remains to be done before our maternal death rate will be lowered. One thing seems certain—a large percentage of our mortality amongst pregnant and parturient women is preventable, especially that due to sepsis and albuminuria. Intensive work along these lines would assuredly reduce the high figures that have prevailed for years past.

In attacking this problem the first matter for consideration is the personnel involved, consisting of the profession and the public, and with the profession I would also include the nurse, trained and fully qualified, or practical.

To the public the function of reproduction and parturition is an old story. It is common to the whole animal kingdom. It has gone on along certain lines since time was, and from time to time assistance has been given women in labor, but the public as a whole are grossly ignorant of the dangers incident to preg-


1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
DEATHS from PUERPERAL SEPTICEMIA
Ratio per 1000 living births.
3.0
2.0
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
U.S. Reg. Area
Ontario
N. Zealand
Eng. & Wl's

nancy and parturition. Many a person will converse fairly intelligently on such subjects as small-pox, anthrax, contaminated water and typhoid fever and yet know practically nothing of the serious conditions with which this paper attempts to deal. The attitude of the public appears to be that this physical function has been exercised for many years and that it is usually attended without mishap. It is, and has been an attitude of "laissez faire" and this must be the main point of attack in dealing with the problem.

It is not the intention of the writer to criticize the obstetrical work of the physicians further than to state that bad obstetrical work is occasionally the result of an attempt on the part of the obstetrician to direct nature, rather than to assist her efforts in the delivery. The main body of the physicians in our province are conscientious men who realize the responsibility they assume in undertaking a midwifery case, and who conduct a labor with every care possible. There is still and possibly always will be the careless man whose hands are unclean, whose instruments are unclean, and who is careless in his methods and in his technique. The doctor of this type will soon be relegated to his proper place by the public, who are now being informed as to reasonable maternal care, and the man who aims to exercise the necessary precautions will be appreciated accordingly.

In this connection, I should like to read you a letter received by Dr. McCullough, Chief Officer of Health, on Tuesday of this week. It reads as follows:

Dear Sir,

I came on a paragraph in "Social Welfare" recently which stated that 2,000 mothers die annually in Canada on account of child-birth, of which deaths *90% are preventable,* and was shocked to think of such waste in this civilized age.

This brought to mind the loss of two mothers in our Township during 1921:

(1) B.K.F., aged 36 years, and mother of two children, gave birth to a still-born infant on December 8th, 1920.

On January 3rd, 1921, she died after great suffering. The cause of death given on the doctor's certificate was:

Primary. "Sepsis and Phlebitis."

Contributory. "Pulmonary Thrombosis."

It may be argued that this woman did not have competent care during her illness, but a friend of mine who was present at the birth told me that the doctor *was not careful* to cleanse his hands or sterilize his instruments in the thorough manner any other doctor she had seen at work on such an occasion would do.

(2) A.M., nearly 41 years of age, the mother of three or four children, was attended by the same doctor as Mrs. F. Mrs. M's death, which occurred November 24th last, was given as due to the following cause:

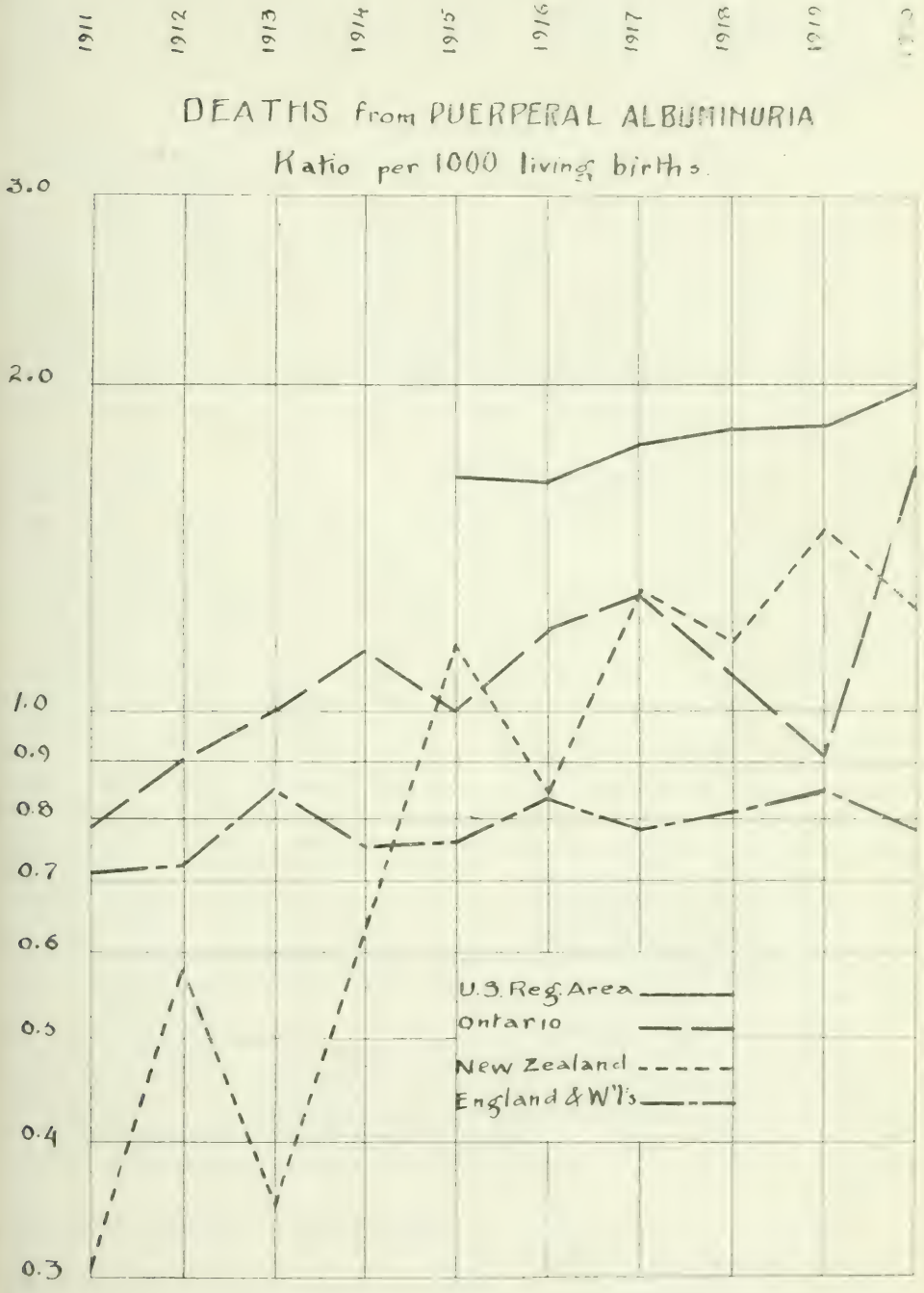
Primary. "Abortion caused by fall with subsequent Toxaemia."

Length of illness—"18 days."

Contributory. "Pulmonary Congestion."

Did an operation precede death? "Yes, November 1st, 1921. Curettage."

I do not understand these medical terms but know that intelligent neighbors of this woman were indignant at her death - so resolved to bring the matter to your attention.


1911
1912
1913
1914
1915
1916
1917
1918
1919
DEATHS from PUERPERAL ALBUMINURIA
Ratio per 1000 living births.
3.0
2.0
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
U.S. Reg. Area
Ontario
New Zealand
England & W'l's

I do not know what the law would do in such cases, but know the bereaved husbands are too busy caring for their little children to inquire into it.

Is there no law compelling a medical practitioner to be *clean* and to *sterilize* everything properly—yes, and instruct the attendants exactly what to do along these lines—or can he go blundering on until public opinion wrests his practice from him?

Sincerely yours,

M.A.F., (*Township Clerk*).

At an earlier point in this paper, I referred to the comparatively low maternal death rate of England and Wales, to the high rate prevalent in Ontario which is showing no tendency to decrease, and to the still higher rate for the City of Toronto. England has a midwife problem, the majority of the obstetrical cases in that country being attended by these women. Recently, however, the English midwife has been given a course of training and is obliged by law to maintain a certain standard of proficiency and to refer cases presenting complications to an obstetrician. Further than this, in England they have a very extensive system of health education, and this I submit is the chief reason for their lower mortality rate. In Toronto and in the Province of Ontario, there is inaugurated a system of health education through public health nurses, which must eventually result in a lowering of our maternal death rate. In the province we have at present, working under the Maternal and Child Welfare Division of the Provincial Board of Health, sixteen nurses who are located in various centres where they remain for periods varying from two to six months. During this time they endeavor to demonstrate to the community the value of the service of a public health nurse, and to have the municipality establish a permanent community nurse at the expiration of the demonstration by the departmental nurse. During the demonstration the nurses give instruction in practically every branch of public health, but especially do they stress the teaching of maternal and child-welfare. They teach pregnant women that slight bleeding during pregnancy should be investigated, that headache is a danger signal not to be neglected, that swelling of the feet, hands and eyelids is a matter of concern, that cleanliness is of extreme importance in preparing for the labor, during the labor and in the after treatment, and that in every case the pregnant woman should select her medical attendant early, should keep closely in touch with him throughout, and should carry out his instructions to the letter for her own benefit.

When we get this teaching instilled into the public we will have fewer cases of septicaemia, with a consequent marked lowering of our maternal mortality. This practical system of health education of the public must appeal to all present as striking at the fundamental cause of our high death rate in pregnant and parturient women, and on its extension we feel the province must place the greatest dependence for a reduction to the irreducible minimum in this connection.

There are other points which are debatable but which might be submitted for your consideration in this connection.

(1) At the present time the Mothers' Allowances Board gives no aid in maternal cases. They do give aid to foster mothers, to mothers deserted for five years, to those with insane or incapacited husbands and to a widow with children. Does this meeting agree with me that the authority of the Mothers' Allowances

Board should be increased, that they might, after reasonable investigation, have the right to extend aid to deserving maternal cases, and thus relieve the parturient woman temporarily at any rate, of financial worry?

(2) Does this meeting consider that there should be an enforced period of rest for two weeks before labor is expected and for four weeks after it has taken place, and how would it suggest such enforcement being carried out?

(3) Is it the opinion of this meeting that for work in the outposts of our province pre-natal advice to pregnant women might be given in a series of pre-natal letters, which have been found valuable as used elsewhere, and that provision might be made for obstetrical cases in small municipal hospitals, such as are in existence in the Province of Saskatchewan?

I thank you for your consideration of this very imperfect presentation of a most important problem.

NOTE. The writer desires to express thanks to Mr. S. J. Manchester, of the Registrar-General's Department for the preparation of charts and statistics used herein.

STATEMENT OF BIOLOGICAL PRODUCTS

Distributed Free of Charge by the Provincial Board of Health, Ontario

November 1st, 1921, to October 31st, 1922

Month	Smallpox Vaccine points	Cost	Diphtheria Antitoxin Units	Cost	Diphtheria Antitoxin Syringes	Cost	Schick Outfits	Cost	Toxin Antitoxin	Cost	Anti-meningitis serum-vials	Cost	Intraspinal outfits	Cost	Tetanus Antitoxin Units	Cost	Tetanus Syringes
November	26,780	1071 20	64873M	9730 95	5,142	1028 40	30	4 50	4	1 66	76	76 00	21	9 45	746 000	223 80	31
December	20,465	818 60	43,276	6,491 40	3,129	625 80	...	...	...	...	75	75 00	24	10 80	807,500	242 25	57
January	54,835	2,193 40	45,041	6,756 15	3,274	654 80	80	12 00	6	2 50	59	59 00	14	6 30	692,500	207 75	148
February	37,450	1,498 00	35,672	5350 80	1,886	377 20	9	1 35	83	12 39	120	120 00	25	11 25	611 500	183 45	54
March	12,505	500 20	25,146	3,771 90	1,691	338 20	63	9 45	..	....	57	57 00	11	4 95	272,000	81 60	10
April	16,725	669 00	28,610	4,291 50	2,360	472 00	24	3 60	....	.....	48	48 00	17	7 65	458,000	137 40	69
May	10,340	413 60	18,477	2,771 55	1,509	301 80	...	...	...	....	160	160 00	15	6 75	583,500	175 05	5
June	12,675	507 00	18,822	2,823 30	1,523	304 60	251	37 65	27	27 00	122	122 00	31	13 95	511,500	153 45	102
July	4,375	175 00	12,299	1,844 85	557	111 40	43	6 45	5	5 00	15	1	0	.....	515,500	154 65	26
August	6,450	258 00	28,078	4,211 70	2,279	455 80	86	12 90	15	15 00	59	59 00	1	45	413,000	123 90	67
September	8,230	329 20	23,586	3,537 90	991	198 20	45	6 75	1	1 00	56	56 00	9	4 05	690,000	207 00	14
October	5,725	229 00	46,109	6,916 35	1,396	279 20	49	7 35	24	3 36	98	98 00	23	10 35	413,000	123 90	5
	216,555	8,662 20	389,989	58,498 35	25,737	5,147 40	680	104 00	165	67 91	945	945 10	191	85 95	6,714,000	2,014 20	588

SUPPLY STATEMENT

Month	Cost	Tetanus Antitoxin outfits	Cost	Pasteur treatment for Rabies	Cost	Pertussis Vaccine 10cc.	Pertussis Vaccine 25cc.	Silver nitrate solution	Typhoid vaccine cc.	Total cost.	Diphtheria Antitoxin Syringes	Intra-spinal outfits, Anti-Meningitis Serum	Tetanus Antitoxin Syringes	Tetanus Antitoxin Outfits	Total
November	6 20	2	90	2	30 00	357	60	181	985	12,183 06	1,028 40	9 45	6 20	90	1,044 95
December	11 40					311	65	384	1,410	8,275 25	625 80	10 80	11 40		648 00
January	29 60	1	45			277	58	111	522	9,921 95	654 80	6 30	29 60	45	691 15
February	10 80	3	1 35			201	37	267	445	7,566 59	377 20	11 25	10 80	1 35	400 60
March	2 00	1	45			187	21	123	300	4,765 75	338 20	4 95	2 00	45	345 60
April	13 80	1	45			116	18	246	210	5,643 40	472 00	7 65	13 80	45	493 90
May	1 00	4	1 80			460	39	439	2,540	3,831 55	391 80	6 75	1 00	1 80	311 35
June	20 40	1	45	2	30 00	317	37	223	870	4,039 80	304 60	13 95	20 40	45	339 40
July	5 20	1	45	3	45 00	193	19	137	2,067	2,363 00	111 40		5 20	45	117 05
August	13 40	2	90	1	15 00	159	39	310	3,612	5,166 05	455 80	45	13 40	90	470 55
September	2 80	7	3 15			256	9	7	1,382	4,345 95	198 20	4 05	2 80	3 15	208 20
October	1 00	2	90			341	37	637	2,885	7,669 41	279 20	10 35	1 00	90	291 45
	117 60	25	11 25	8	120 00	3,175	469	3,365	17,228	75,771 76	5,147 40	85 95	117 60	11 25	5,362 20

Total Cost	$75,771 76
Revenue	5,362 20
Net	$70 409 56

CASES AND DEATHS FROM COMMUNICABLE DISEASES

Reported Weekly by Local Boards of Health for the Year 1921

Date 1921	Smallpox		Scarlet Fever		Diphtheria		Measles		Whooping Cough		Typhoid		Tuberculosis		Infantile Paralysis		Cerebro-spinal Meningitis		Syphilis	Gonorrhea	Chancroid	Influenzal Pneumonia		Pneumonia
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Cases	Cases	Cases	Deaths	Deaths
January	902	3	613	17	876	63	595	9	396	9	43	13	166	114	3	3	2	2	195	245	12	34	18	271
February	867	5	622	15	565	59	395	8	257	17	37	10	194	147	.	.	12	12	240	221	8	53	17	374
March	526	4	436	16	447	47	238	4	237	19	30	11	181	134	.....	6	9	5	211	157	10	78	42	315
April	383	2	365	7	409	34	284	0	165	16	32	5	196	121	...	...	7	6	219	236	1	90	30	250
May	533	1	386	11	434	32	516	8	228	15	38	8	224	130	3	2	10	7	261	252	6	31	19	181
June	170	2	289	6	371	20	390	2	194	7	29	5	220	105	.	.	9	9	112	155	3	2	2	126
July	104	1	101	3	285	19	223	3	227	7	44	18	165	121	3	0	4	4	159	204	4	2	2	114
August	24	.	114	3	264	28	50	.....	151	6	152	27	213	139	23	3	3	1	144	175	5	2	2	83
September	48		171	5	294	25	14	.....	150	10	120	31	175	115	17	1	8	8	226	166	1	35	4	98
October	16		384	15	685	56	16	3	129	7	100	30	176	118	21	4	4	4	271	256	4	10	5	129
November	76	.	513	12	940	82	36	1	78	9	72	21	207	117	10	1	6	5	256	287	2	14	14	169
December	128	...	600	16	743	60	94	2	95	9	28	5	174	139	1	0	5	3	183	230	5	4	4	215
	3777	18	4564	126	6313	525	2851	40	2307	131	725	184	2286	1500	81	20	79	66	2477	2584	61	355	159	2325

*Only 73% of deaths reported.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 1.

from,

T. J. McNALLY, D.P.H.,

District Officer of Health.

I have the honour to submit the following marginally noted report for this District which comprises the Counties of Lambton, Essex, Kent, Elgin, Oxford, and Middlesex, exclusive of the border municipalities and the City of London, these being over 50,000 population and under a full time Medical Officer of Health who is directly under the supervision of your Board.

In this District there are 115 organized municipalities composed of sixty-eight townships, twenty-six villages, seventeen towns and four cities, each with its own local Board of Health regularly constituted.

Public Health Nursing.

During the year intensive Maternal and Child Welfare work has been carried on in the cities of St. Thomas and Chatham, also in the towns of Ingersoll, Amherstburg, and Blenheim as well as in the township of Harwich by your Public Health nurses appointed to this District, and as a result a local Public Health nurse has been appointed in Ingersoll, St. Thomas and Chatham, being supported in each case partly by voluntary subscription and partly by municipal aid.

After the demonstration in Amherstburg an attempt was made to have a local Public Health nurse appointed to be partly supported by The Brunner Mond Corporation and partly by the municipality, but this did not receive the sanction of the Town Council, I am sorry to say.

In Blenheim the survey and demonstration of intensive work is being continued by your nurse, and at the same time she is introducing the work into the Township of Harwich; in both of these municipalities she has completed an examination of all the school children.

It is intended to make an effort to get these municipalities to unite for Public Health work by the appointment of a local Health Nurse, but I fear unless The Department of Health gives some financial assistance it will not be accomplished, as the councils in these smaller municipalities appear to think the expense too great to add to their present tax rate, although personally in favour of the work and appreciative of the benefits resulting therefrom as already demonstrated.

In addition to the above work in this District, the Child's Welfare special was taken to as many as possible of the school fairs, in the County of Essex where your nurses and Dr. Bell conducted a clinic at each; and follow up work was carried out afterwards by the nurse.

This course was much appreciated by the people and the discussion it created has done much to arouse public interest in the work carried on by a Public Health nurse, so much so that the representative in charge of these fairs has requested that the same course be put on next year.

Canneries and Milk Products Factories:

There has been considerable improvement in the care of the effluents from these factories, but in several instances just complaint has been made, requiring several special trips to assist the local authorities in having conditions improved and the nuisances therefrom abated.

In an effort to formulate a uniform method of treatment for canning factory effluents the Provincial Sanitary Engineer, Mr F. A. Dallyn, Dr. Clinton, District Officer of Health for District No. 4, Dr. D. A. McClenahan, District Officer of Health for District No. 3 and the writer were appointed by the Chief Officer of Health to visit the Eastern factories of The Dominion Canners during the week of August 24th while they were in operation.

The result of our observations is being developed by the Engineering Division of the Public Health Department, which, we hope will result in a uniform method of treatment being approved, though from our observations of the different systems in operation, we concluded that the success of whatever method might be decided upon, would depend largely upon the efficiency of the local operator, more than upon the form of treatment decided on. In this research, the executive officers of the company gave us every possible assistance as well as personally conducting us to and through their several plants visited.

Milk Supplies:

In this District as the result of our efforts several municipalities have, during the year, passed milk by-laws so that now all the cities and most of the towns and larger villages have regular inspection of the milk supply made under the supervision of the local Board, but there is yet considerable to be done in this field before conditions are entirely satisfactory.

Meat Supplies:

There has been considerable progress made in the enforcement of the regulations concerning slaughter-houses and I hope during the incoming year to have all brought up to the standard set by your Board but, even then, constant supervision will be required to secure reasonable care in the preparation of local meat supplies.

Rural Schools:

Gradually, though slowly, through the co-operation of the School Inspectors, and the annual visitation and survey made by the local Medical Officers of Health, some improvement is being made in the sanitary conveniences at these schools as well as in their care and cleanliness.

In connection with our work along this line there is being evolved in the minds of trustees and parents a clearer conception of the causes of diseases and their routes of travel from the infected to contacts as may be noted in the provision of basins, soap and sanitary towelling in some schools for the use of pupils and teacher.

Proper heating and lighting is also receiving more consideration, and personal hygiene is being improved through short talks by the local officers to the pupils on the occasion of their visits to inspect the sanitary condition of the school and its surroundings.

Provision of pure and wholesome water supply for drinking purposes is being more generally made and protection from contamination looked after especially in regard to proper pumps and water tight covers for the wells. There is a marked exception to this noted in schools adjacent to the St. Clair river and lake, where in many of these the water for the pupils to drink is obtained from the contaminated river and lake and supplied without any attempt being made to purify it.

The trustees in several of these sections claim that it is impossible to obtain well water suitable for drinking purposes as they have repeatedly tried and failed.

Educational:

During the year I have by request given addresses on Public Health to several Women's Institute meetings and also to County school trustees' meetings, thus interesting those who are assisting in forming public opinion on matters of Sanitation and Hygienic living.

I have also taken up at three County medical society meetings the relationship between the general practitioner and the Department of Health.

In addition to the above efforts to bring about a more appreciative public attitude towards Public Health matters I have as frequently as possible met local Boards of Health and Councils as well as other public associations and discussed with them local as well as general Public Health questions.

Public Service Superannuation Board:

During the year I have been called upon to make two examinations and reports for this Board upon persons applying for superannuation.

Reports on Cemeteries:

In compliance with instructions from the Chief Officer of Health I made examination of, gathered information required and reported upon all cemeteries in the District, as far as possible for me to do in the time at my disposal. This entailed an immense amount of work and occupied about four months of the year; even at that I must confess the information obtained was not as complete as I would like to have given.

In many cases it was very difficult to learn who was responsible for their care or could supply dependable information.

As this subject has already been reported upon and is not actively connected with Public Health, further comment does not appear to be called for in this Report.

Communicable Diseases: Smallpox:

This disease has during the year appeared in several municipalities but in very mild form and so far as I am aware without any fatality resulting.

In most instances the local Medical Officer of Health successfully controlled the outbreak, though in seven municipalities I was called upon to assist the local authorities in suppressing the disease.

Scarlet Fever:

The local authorities have, in most instances where this disease appeared, successfully controlled the outbreak, confining it within comparatively narrow bounds. The type has been mild, hence frequently in its early incidence unreported or unrecognized. In one municipality I was called upon on four occasions to assist in its control, owing largely to disputed diagnosis, while in each of two other cases I had to make a special call to support the local authorities in its suppression. In no case did the disease assume the proportion of an epidemic.

Tuberculosis:

In reference to this disease I do not believe its incidence has been quite so common this year as for the past few years, though we have not regained the ground lost through stress of the Great War.

I am pleased to note that the Dominion Tuberculosis Association purpose inaugurating an extension service in connection with Sanitoria for the control

and treatment of this disease along the line suggested in my report for 1920, providing sufficient funds are available. I sincerely hope the Dominion and Provincial Governments may see their way clear to give this undertaking the required financial assistance, since the scheme as outlined is well conceived and I am confident will, when developed, be a long forward step towards controlling this insidious disease.

Diphtheria:

The incidence and death rate from this disease is continuing entirely too high, largely I believe, due to failure in bringing cases early enough to the physician for treatment; hence the necessity of impressing upon the public the importance of consulting the family physician *at once* upon the appearance of any "sore throat" or "discharging" nose, as these latter too frequently are due to this disease and form a large proportion of the missed cases. Two municipalities called upon me for assistance in clearing up this disease.

Measles:

The type of this disease has been mild and its incidence rather less frequent this year than usual. Quarantine is now being better observed since the time has been reduced to two weeks.

Whooping Cough:

The isolation of patients suffering from this disease is not as rigidly enforced as appears desirable, though the severity of cases and its incidence are being materially lessened through the use of the vaccine given out by your Board.

Typhoid Fever:

The supervision of public water supplies together with treatment and control of sewage has practically eliminated epidemics of this disease, yet eternal vigilance is required by health authorities to prevent any relaxation of control by those responsible for the care of these works.

On August 14th, 1921, I was instructed by telegram by the Chief Officer of Health to investigate, assist in the control of, and report upon an epidemic of typhoid fever at the Ontario Hospital at London, which I did, and submitted the following report on August the 23rd.

Typhoid Outbreak: Ontario Hospital, London, Ont.

In compliance with instructions by wire, which reached me on the 14th (Sunday) instant I visited the marginally noted institution on that date and on enquiry from the doctor in charge (Dr. Kaiser) I learned that the first cases showing symptoms of typhoid occurred on or about the 29th of July, though these patients might have been ailing a few days before and the condition not be apparent owing to their mental condition (the first one quoted being a deaf mute imbecile).

Later investigation disclosed that as early as the 26th of July, patients in another building were affected and that for two weeks before that diarrhoea was fairly prevalent (so Dr. Robinson informed me), thus establishing the time of the pollution of the water supply and the source of the infection as being carried into the supply through the unusual and excessive rainfall of July the tenth.

The bacteriological examination of the water disclosed the presence of colon in 1/10cc and this continued even after the springs were cut off, thus revealing that the source was probably human as the well was found pure and the reservoirs

and taps polluted; my conclusion on this first visit was that the infection or rather the pollution came from the septic tank which is but ten feet more or less from the water reservoir in the yard, and the analyses of the water show that the water gradually became pure and then suddenly reinfected.

It appeared to me that the reservoir in the yard was grossly polluted on the 10th by the rush of surface water swept over a bush covered area which was fouled.

I recommended on this visit that city water be used and the tanks cleaned out and thoroughly chlorinated; nothing had been done up to this time or any change made, except to cut off the spring supply.

Owing to other urgent duties I was unable to complete any further survey until the 18th instant, when I found the water was still being supplied through the tanks, some city water being added to the supply which repeated examinations proved to be polluted at the taps.

A commencement had been made towards clearing the tank in the yard by pumping the water out, but the water was passing through the reservoir under the machine shop without its having been purified or cleaned.

A further survey on this occasion revealed the fact that the water and sewage backed into the engine room raised to two feet above the overflow of the tank under the machine shop, thus fouling it and it was also found that the shut off between this tank and the one in the yard was defective, thus explaining the uniform impurity of the water in the reservoirs.

On this occasion I again recommended the use of city water as they could not use the well without using the tanks; the difficulty in using city water was that it did not give pressure enough to flush the third storey toilets, so I suggested that in the meantime these be flushed by pail. I understand this recommendation has been carried out and also the cleansing of the reservoirs, but the further recommendation that their water system be purified by passing chlorine in with the supply has not been followed and on enquiry at the Institute of Public Health to-day I learn that the water still shows colon bacilla in 10cc and one sample examined to-day gas developed in 1/10cc.

Another condition that I consider dangerous is that the pipe between their meter and supply passes through an area traversed by sewers and in this pipe the water is not under pressure, so that any seepage of sewage would likely find entrance to the water supply, if the water pipe were at all defective. I recommended that this pipe be cased in cement.

I am informed that it is intended to put down a new deep bored well just west of the present well; I consider this a dangerous procedure as the whole area is a network of sewers old and new and entirely unsafe as a source of water supply.

The present supply has so far during this outbreak been pure, the whole trouble being between the well and the distribution system, yet I consider the position of the supply a potentially dangerous one.

On both of my visits I advised that all persons in the Institution should be inoculated against typhoid (who had not already come down with the disease). I was informed on my first visit that all attendants had been advised to take this precaution but it was not compulsory and on my second visit Dr. Robinson said it was being carried out as rapidly as possible.

The first Widals made on the 29th of July were found to be negative and blood cultures of the same date were also negative.

Repeat Widals of these same cases on the 6th of August were positive. Up to the present time 103 Widals examinations have been made of which about 20 are repeats. There have been 53 found positive.

I should have explained that on my first visit Dr. Robinson was not on duty as it was his Sunday off and so it was not until Thursday that I had an opportunity to go over the situation with him personally.

In conclusion permit me to say that the most painful impression was made on me by the haphazard way in which the sewers, septic tank and water pipes were intermingled even the overflows entering a common drain. There is no general plan on file to assist in arriving at a positive opinion as to all sources of danger and in the present instance I have not so far arrived at a satisfactory explanation of why this supply apparently cleared up and then suddenly became quite as bad as in the first instance.

In this connection I recommend that a complete plan be prepared and kept on file and that this plan show not only the sewers and connections now in use but the location of those discarded as far as possible and that the plumbing be thoroughly gone over and a plan of this also kept: from my very casual observations there is much to be desired in regard to the plumbing.

I further recommend that when these plans are prepared the Department concerned have them gone over by expert sanitary engineers and the systems corrected where defective, and if I might be permitted to go further, that this recommendation should be applied to all such Public Institutions as the experience in this institution is too ghastly to have a repetition in some other institution: it seems to me quite apparent that the whole difficulty is that these systems and changes in the systems are installed without the supervision of trained experts in that line.

Regular Inspections:

In addition to the work already briefly reported upon, I made a regular visit of inspection to 113 Municipalities and carefully reviewed with the Local Medical Officer of Health the work done by the Local Board, indicating to him any condition where I considered improvement or extension of their duties might be made.

I was also called upon to make ten special trips to different Municipalities to abate nuisances, three in connection with Venereal Diseases, eight were required for supervision of Slaughter-houses, three for care of Public water supplies, five for control of sewage disposal, and four for correction of abuses in connection with garbage disposal.

I am pleased to report that the City of Chatham is about to install a modern incinerator for the disposal of their garbage.

Morbidity and Death Reports:

I regret to note that there is not any improvement in these reports, in fact they are neither complete nor promptly reported: as made and recorded at present they are not only misleading but practically of little if any use in epidemiological work and, as statistics, the conclusions drawn from them are of little scientific value.

I respectfully urge that such action be taken as in your judgement will lead to prompt and accurate reporting as Health Work, without accurate and prompt reports and statistics, is just as seriously handicapped as a business concern without proper and accurate book-keeping.

All of which is respectfully submitted for your consideration and action.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 2.

SIR,—I have the honour to submit summary of the work done in the latter half of the year 1921.

On July 1st I took over the District from Dr. Wodehouse. In March, Simcoe County and Muskoka had been transferred from District No. 4 to District No. 2.

During part of July and August with Dr. Bell I inspected the summer resorts in Muskoka and Georgian Bay Districts. In all we visited 112 places as follows—Muskoka Lakes 54, Lake of Bays, etc., 34, Sparrow Lake 14, Georgian Bay 10. On the whole they were well conducted from a sanitary point of view. This is very important where there are so many thousands of visitors from all parts of Canada and the United States. But constant supervision is required to keep them up to standard. Many of the proprietors of boarding houses and hotels would get lax if they had not always the incentive of a visit from one of your inspectors. This is especially true of the larger places. By encouraging, warning and threatening much has been accomplished. One hotel only had to be warned that unless sanitary conditions were improved, they would not be allowed to open next year.

Special visits were made as follows, detailed reports of which have been sent to the Provincial Board.

July.—Dairies, Midland.

August.—Creamery, Logan Twp.; Garbage Dump, Utterson; Infantile Paralysis, Orillia.

September.—Tuberculosis, New Hamburg.

October.—Abattoirs, Kitchener; Smallpox, Palmerston; Diphtheria at Preston; Scabies, Listowel.

December.—Cattle Yards, Rockwood; Emmons family, Severn Bridge.

Water Supply.—The water supply in most places is good, with the exception of three towns, viz.: Goderich, Hanover and Kincardine. Goderich will have to extend their intake. Kincardine needs a filtration plant. Hanover requires both a water works and sewerage system. It is hoped these will be completed in the coming year.

Dairies.—An active campaign is being carried on to secure pure wholesome milk. The butter fat is well up to standard, but there is still dirty milk being sold. More care is needed at the source, that is at the producers'. Much can be done by education and publicity. Many towns publish the results of the examination for butter fat and for dirt, in the local papers. This has had a good result.

When we realize that dirty milk may be responsible for outbreaks of typhoid fever, scarlet fever, diphtheria, tuberculosis and septic sore throats, we see how necessary is a pure supply.

But more than this even is the importance of a pure milk supply in its relation to Child Welfare and the lowering of the Infant Mortality rate.

Slaughter Houses.—A great deal of work has been done in improving the slaughter houses. They are in fairly good condition throughout the District.

Child Welfare.—The great need in Public Health work to-day is education. The greatest factor in this education is the Public Health Nurse, who goes into the home and imparts knowledge at first hand.

Public Health Nurses are now established at eight places in this District—Galt, Owen Sound, St. Mary's, Kitchener, Stratford, Collingwood, Barrie and Orillia. Demonstrations have been put on at Guelph, Walkerton and Goderich. These places while in sympathy with the work, plead financial stringency as the reason for not engaging one. Midland has asked for a demonstration. Midland had the highest Infant Mortality rate in the Province shown by the latest report, and I firmly believe a Health Nurse could do a great deal in lowering this rate.

COMMUNICABLE DISEASES.

Smallpox.—This disease has not assumed the wide spread prevalence it did last year. I was called to see only one case, at Palmerston. Strict quarantine and vaccination were instituted and no other cases were reported. This lull in the disease should not lessen the importance and necessity of vaccination.

Scarlet Fever.—Has occurred in many localities but in a mild form. Nowhere has there been an epidemic.

Diphtheria.—Was very prevalent during November and December. One noticeable feature about it was that cases would occur in different parts of a town on the same day with apparently no connection. There must have been mild cases that did not present themselves for treatment. In all places vigorous search was made for carriers, which tend to spread the disease.

Measles and Whooping Cough.—Nowhere assumed epidemic form. Good reports are received of the vaccine supplied by the Provincial Board of Health for Whooping Cough.

Infantile Paralysis.—One Municipality asked for help in checking this disease, eleven cases had occured, no deaths. The Local Health Officer had all cases reported and quarantined and its spread checked.

Typhoid.—The only epidemic of Typhoid was at Hanover where there were fifty-six cases and two deaths. The cause was traced to the water supply and a new system has been ordered to be installed.

Tuberculosis.—There are scattered through the country certain foci of Tuberculosis. These are cases where the bread winner, usually with a large family, has contracted the disease. He does not wish to go to a sanitarium unless he has the assurance that his family will be provided for. These are unfortunate cases and it seems only right that the municipality should assume responsibility not only for the patient but for his family as well. District Nurses would help in these cases in showing the family how to live properly and how to prevent the spread of infection.

Branch Laboratory.—A branch of the Provincial Laboratory has been opened at Owen Sound, under the supervision of Dr. Murray Fraser. Although it has been in operation only two months, it has already been of great benefit to the northern part of the District. Examinations are made and antitoxins and

serums distributed effecting a great saving of time which is so essential in cases requiring this work. A V.D. clinic is held in the same building, over sixty cases being under treatment to date.

An encouraging feature of Public Health work is the increasing interest being taken in the rural districts. This is due to and will continue to grow through the sanitary survey of the schools. The school is the natural place to instill ideas of hygiene and cleanliness. As the children go out from the school they will carry these lessons into the home. The District Officers are now able to reach the rural parts by car which tends to create interest leading to a desire for knowledge of what is being done in other places.

All of which is respectfully submitted.

J. J. Fraser,
District Officer of Health District No. 2.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 3.

Epidemiology.

There were a large number of cases of infectious disease in my District during 1921. At the present time the work of the District Officers of Health seems to be largely taken up with the suppression of communicable disease. There are other phases of Public Health activity that some may think are more important viz: Child Welfare, the control of venereal disease and the fight against tuberculosis but, rightly or wrongly, infectious disease and its control looms large in the work of the average Health Officer. In the attempt to control infectious disease we meet difficulties and discouragement: mild cases, missed cases and carriers are often instrumental in the spread of disease. Isolation from which so much has been expected seems to fail particularly with regard to measles and scarlet fever. It is very important to recognize the initial case. Given a correct diagnosis in the first case of Smallpox in a community, I have repeatedly seen the disease confined solely to the house in which it originated. The mild cases of infectious disease are difficult to deal with. We have not yet gotten the public sufficiently educated so that they notify the Health Officers of a suspicion of some infection. We need that co-operation from the public. The missed cases are still harder to deal with as they are not recognized by anyone. The only time they are suspected to have occurred is when pronounced cases, which they have caused, break out. There is great need to seek out and control the missed ones. With the presence of carriers a similar problem presents itself. Even when we can detect carriers in Diphtheria, Typhoid, etc., we are confronted with opposition from parents and friends in our attempt to isolate them. I am inclined to think we should revise our method of procedure. It is still common to take swabs from the throats of children in schools and isolate those shown to be carriers. This entails the opposition and criticism of parents and friends and we cannot be sure how long the suspect may be isolated. I think in these cases a virulence test should be done because there must be many cases showing the presence of Klebs-Loeffler Bacillus which are non-virulent. I think the procedure should be to do the Schick test on all children in the schools, find out those susceptible to diphtheria and then immunize them, not by anti-toxine which is a short lived immunity, but by a mixture of Toxine-antitoxine which substance will produce an immunity which may last throughout life. Health Officers are loath to admit failure in the control of infectious disease but they must be frankly admitted. This does not mean that we should fold our arms and say the task is hopeless. We must carry on the fight, increasing where possible the number of workers and so perfect our organization that we may look for better results in the years that are to come.

Tuberculosis.

Steady progress is I think being made in the fight against the White Plague. With the increasing numbers of Public Health Nurses throughout the District, the cases of Tuberculosis are being searched out and are placed under earlier treatment. It is being more and more recognized that contraction of Tuberculosis by adults is comparatively uncommon and that it is in childhood that the infection gains entrance. It is very important then that children should not be allowed to come in contact or remain in contact with any one who has an open lesion of Tuberculosis. If a father or mother of a family should have Tuber-

culosis they should be removed from contact with their children. This may look like a harsh measure, but is necessary for the safety of the children. Victims of T.B. should be sent to sanitoria where possible, if only for a time, that they may be taught how to live so that the danger to those about them may be minimized.

Good work is being done by Sanitoria in my District at Weston—Mountain San. at Hamilton and also in a smaller way at St. Catharines and Brantford. Public Health nurses are a great help in that they may go into the homes and teach the people how to live so as to avoid infection.

Venereal Disease.

I think we are getting more reliable statistics in regard to the incidence of these diseases than ever before. The establishment of clinics for free treatment of these cases is very beneficial. We have clinics at present established in my District in Toronto, Hamilton and Brantford. It is aimed to keep patients under observation until they are completely cured and non-infective.

Smallpox

We have had a number of cases of Smallpox in this district during 1921. There are still some remnants of an epidemic in Niagara Falls. The cases have been on the whole of a mild character. It is regrettable that the Vaccination Act is not better lived up to. Smallpox is one of the few diseases which we can prevent but compulsory vaccination is very unpopular and it is only when an epidemic is present or imminent that we can get the public to submit to vaccination. I have seen a large number of vaccinations done and have never yet seen any serious consequences from this slight operation. Anti-vaccinationists are quite active in some parts of the Districts and not much effort is made to refute the specious arguments which they advance. I think the advantages of vaccination should be constantly kept before the public. Carelessness and indifference are I think responsible for so few vaccinations being done. I believe it would pay all municipalities to vaccinate free of charge all who could be induced to come.

Typhoid Fever.

This disease is more common now in the smaller towns and rural sections than in the cities. We had an interesting epidemic of this disease at Vineland during the past year. There were about twenty-five cases in all with, I think, three deaths. On investigation it was found that the only thing which all the people in the different homes affected used in common was the milk supply. Every house where Typhoid was present got its milk supply from the same source. Then if the milk carried the infection it must have received it from handling. Mr. Moyer was the proprietor of the dairy farm from which the milk came. He also assisted in the milking. His blood showed a positive Widal, and on examination of the faeces, the germ of Typhoid was discovered. Milk was stopped from Mr. Moyer's dairy and the epidemic subsided. It is interesting in this connection to note that a few cases of Typhoid had been occurring in the neighborhood for a number of years, probably four or five cases per year. Probably the same carrier may have been responsible.

Scarlet Fever.

There have been a large number of these cases in the District. Scarlet Fever and Measles are the most difficult cases to control, on account of the large number of mild and missed cases.

Diphtheria.

As mentioned above I think it advisable here to use the Schick test on all children, and then try to immunize with toxin-antitoxine all those found to be susceptible to the disease.

Cemeteries.

I have been unable as yet to visit all the cemeteries in my district. A great many of them, probably about one-third are in bad condition. There is considerable difficulty encountered in some cases in finding to whom the cemeteries belong. I am of the opinion that except in very rare instances the location and up-keep of a cemetery is not an important public health matter. If it is thought advisable for the Health authorities to have supervision over the cemeteries, then I would recommend that the local M.O.H. be made responsible for their inspection. Certainly they should, I think, be under local supervision.

Child Welfare.

When the Public Health nurses were appointed by the Provincial Board of Health, two of them, Miss Hamilton and Miss Smith were allotted to my District. They have done excellent work and have been most successful in popularizing this most important branch of public health effort, and in having permanent nurses appointed to carry on the work following their demonstrations. No small amount of the credit due for the success of the nurses should be given to Dr. Bell, Dr. Middleton and Dr. Cunningham. Permanent Public Health Nurses have been appointed in Niagara Falls, Welland and Thorold. York Township is on the point of appointing one for the Township. The Town of Newmarket following a demonstration by Miss Smith and Miss Hamilton, appointed a nurse for three months, but the service was discontinued at the end of that time on account of lack of funds.

Industrial Hygiene.

The new department of Industrial Hygiene with Dr. Cunningham as Director has been very active during 1921. An extensive study of the Rubber Industry has been made by the Director in my District. I have visited the rubber industries, collected information and sent filled out returns to Toronto. Both employer and employees are deeply interested in the health hazards of the different forms of industry, and I have received very sincere co-operation on my visits to the various plants. This is a most interesting phase of public health work, besides being a very important one, and I look for developments that will be beneficial to employer and employee alike.

Educational.

A new department of medical education, under the directorship of Dr. Middleton has been instituted. This educational propaganda in public health work is really the key-note of all endeavour along public health lines. We must educate the public and then reforms will come rapidly.

It is no use asking for money for public health work unless the public has been taught the idea, and become possessed of it, that the spending of money in public health work is an investment and not an expenditure. Newspapers, moving pictures, cards and the public platform have all been utilized in my district and I think with beneficial results.

General Work.

In addition to the special work indicated above I have had a large number of calls from municipalities in the District. A great many of these related to nuisances. It is still far too commonly believed that the chief function of the Health Officer is to abate nuisances and eliminate bad odours. He is in some places not yet far removed from the outhouse inspector and bad odour eliminator. It cannot I think be successfully shown that bad odours produce disease, so why waste the time of Health Officials in suppressing them, when that time could be more advantageously spent in some public health work, such as obtaining safe water and safe milk for the citizens, child welfare work, the suppression of communicable diseases, including venereal disease, the fighting of Tuberculosis and on Industrial Hygiene.

Conclusion.

I wish to acknowledge in conclusion that in my work as District Officer of Health, during the past year I have received the utmost consideration and support from the Minister of Health, the Chief Officer of Health, and the heads of all the various departments engaged in public health endeavour in the Province. Team work has I think been the outstanding feature of the year's activities and I wish to acknowledge my gratitude to these men and women for very timely assistance given during the year 1921.

D. A. McClenahan,
D. O. H.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 4.

I have the honour herewith to submit for your consideration, a summary of my work for 1921, in the Counties of Prince Edward, Hastings, Northumberland and Durham, Peterborough and Haliburton, Victoria, Ontario, (Simcoe and Muskoka, for part of year).

GEORGE CLINTON, M.D.,
District Officer of Health,
Belleville, Ont.

All Public Institutions, viz:—Hospitals, Asylums, Gaols, Houses of Refuge, Children's Shelters, Summer Resorts and Local Municipalities in my district were visited, Sanitary Inspections made and detailed reports were sent to the Provincial Board of Health.

A goodly portion of my time has been taken up with special visits by request of the Local Medical Officers and Local Boards. It has been gratifying to know that all these visits were effectual in adjusting various local grievances without going to the Courts.

COMMUNICABLE DISEASES.

Smallpox.—At the Portage, an unorganized district near Huntsville, I found several families, from history given, had recovered from smallpox and two families then in the active stage.

Ennismore.—Several cases, but by the co-operation of the Medical Officer of Health, Local Board, and together with the Parish Priest, Rev. Father McCauley, all school children and exposed adults in the locality were vaccinated.

Visited L'Amable and instructed the Local Board to organize effectively, as there had been laxness in dealing with an outbreak of smallpox. Also inspected a number of other places in this locality.

North Marysburgh in Prince Edward County had twenty-two places quarantined at one time.

Picton and Wellington also had several cases.

Bowmanville.—Several severe cases and one death.

Many cases in *Belleville*. Nearly all removed to Isolation Hospital. Preventative measures and fully carrying out the regulations re vaccination, quarantine, etc., the disease was soon under control.

TYPHOID FEVER.

An epidemic of typhoid in Bowmanville—in all six cases—was traced to one milk vendor, who was found to be a typhoid carrier. Measures taken resulted in the sale of dairy and cattle, thereby stopping the epidemic.

Also an outbreak at Colborne—six cases and one death. All these cases were found to have originated from the same source, a polluted well. The family using this well, and friends visiting them, were the only ones affected. The well was closed and there were no new cases.

SCARLET FEVER AND DIPHTHERIA.

Peterborough.—An epidemic during the whole year—mostly mild cases, and its control in consequence has been difficult. One death from Diphtheria.

Several cases in *Oshawa, Belleville* and *Bowmanville*, and smaller places. Strict quarantine and isolating carriers had the desired effect.

Only a few cases of Measles and Whooping Cough reported.

Summer Resorts.

During July and August, all Summer Resorts in my district were visited, viz: The Kawartha Lakes, Rice Lake, Hayden Park, Whitby at the Lake, Oshawa, Sand Banks, Prince Edward County, Presqu'ile near Brighton—and conditions found generally satisfactory, with willingness to follow up suggestions for sanitary improvements where needed.

Rural Schools.

Many of these have improved, but few are up to the standard requirements in sanitation. If the Local Municipal Officer of Health had power to order change much more effectual work would be done. Recommendations are too frequently ignored by the Trustees, and more concentrated effort is required.

Canning Factories.

I visited the Canneries in Northumberland, Durham and Prince Edward Counties. The disposal of waste in many cases was unsatisfactory, causing a nuisance in the locality.

Slaughter Houses.

Marked improvement found in conditions at various Slaughter Houses in district, resulting from carrying out recommendations previously made.

Water Supplies.

Peterborough.—A new filtration plant, costing about $250,000.00.

Oshawa.—Shifting sand filter.

Bowmanville.—Taken from Springs, eight miles north. Ample supply and good pressure.

Port Hope.—Sand filtration.

Cobourg.—Five Mechanical Filters.

Brighton.—Springs, four miles out. Piped into village.

Trenton.—Mechanical Filters.

Orillia.—Springs from the mountain.

Barrie.—Artesian Wells.

Collingwood.—Filtered from Georgian Bay.

Belleville.—The water is taken from the Bay of Quinte and not filtered, although it is freely chlorinated. Conditions are far from satisfactory and a filtration plant is very necessary.

Deseronto.—Has water for fire purposes taken directly from the Bay.

Picton Water and Sewage.

The sewage disposal and water supply at Picton is very unsatisfactory. The water is supposed to be used only for fire, lawn and cleaning purposes, but this is a dangerous position, as there is no doubt water is used from the taps for drinking purposes on occasion.

This water is taken from the harbour only a few hundred yards from the sewage disposal outlet. Sewage system consists of Septic tanks, cess pools, and pit closets, emptying into what are practically drains and ditches leading to the Bay.

In August, I visited plant of The Willard Chocolate Company at Picton used for chocolate products, evaporating milk and cheese manufacture. Found conditions here very unsatisfactory, and recommended closing up the plant. There were no screens on the doors and windows, and swarms of flies covered everything. The milk was sterilized before evaporated. The whey filled the cess pool which overflowed into a ditch causing a very offensive odor.

Public Health Nurses.

In my District, Misses Heeley and Vrooman began work at Orillia and were very successful—combined Ladies Organizations, engaged and paid a Public Health Nurse to follow up the preliminary work already done.

Orillia already had a School Nurse. At Barrie, Miss Heeley was successful in having a nurse appointed to follow up her work.

Miss Vrooman was well received at Tottenham, Allison and Beeton, but no nurse was appointed in any of these places.

Miss Heeley spent some time at Bowmanville, successfully. The Council would not provide a nurse to continue her work.

At Oshawa there are now two Public Health Nurses, besides a School Nurse, also a qualified Sanitary Inspector. This town is now very well organized, and supported in Public Health matters.

Cemeteries.

In June and July, I inspected 51 Cemeteries and reported.

I have failed to find that recommendations have been carried out. In my district there are ninety-one municipalities with from one to six cemeteries in each.

I do not see where this work has any bearing on Public Health Work; it absorbs much time that could be given to other duties.

Report of Dr. G. Clinton, to Provincial Board of Health, March, 14, 1922.

Whitby Gaol.

Building	Stone.	
Gaoler	John Stiner, Salary,	$800.00.
Matron	Mrs. Stiner, "	$200.00.
Physician	Dr. McGillivray, "	$150.00.
Turnkey	H. Elliott, "	$900.00.
Prisoners	13 male, 0 female.	
Total cells	28.	

Flush closets and running wash water in each corridor.
All clean and in good order.
Cost per day for prisoner, 16¼ cents.

Whitby Town.

Population	3,500.
Clerk	A. W. Jackson.
Local Board of Health	The Mayor, F. N. Burn, A. H. Alon, Chairman, and M.O.H.
M.O.H.	Dr. McGillivray, salary $100.
S. Inspector	C. S. Lavery, salary $25., and constable.
Physicians	Drs. McGillivray, E. L. Proctor, E. B. Neely, R. T. McLaren.
Water Commissioner	
Water filtered from lake—good.	
Sewage	Sedimentation and sprinkling filter.
Garbage	No regular collection, except regular spring cleaning.
Milk	By-law. No license.
Meat	By-law. No license.
Slaughter house	Very good.
Light	Electric.
Fire protection	Voluntary brigade.

House of Refuge—Whitby.

Building	Brick, 2½ storey.
Farm	62 acres.
Superintendent	J. F. Lavery. } Salary, $1,150.00.
Matron	Mrs. Lavery. }
Nurse	Mrs. F. Marshall, salary $180.
Physician	Dr. McGillivray, " $300.
Inspector and Secretary for Commission	A. H. Christian, salary.
Inmates	45 male, 26 female.
Water	From town.
Sewage	13 flush closets, 7 baths, all connected with town.
Inmates	Bathed weekly.
Servants	1 man. Salary $45.00 per month.
	1 cook. " $30.00 " "
	1 laundress " $25.00 " "
Animals	2 horses, 12 cattle, 60 hens.

All clean, tidy, only some rooms overcrowded.

Whitby Public School—(New).

Building	Brick, 1 storey and good basement, for play room. Lavatories, wash basins and drinking fountains. Heated by steam.
	Six class rooms well lighted. All [illegible] frosting upper half of Windows.
Ventilation	Very poor. None from basement and lavatories only stairways to hall and class rooms.

Building cost $60,000
If properly ventilated would be first class.
Pupils ..... 235.
Kindergarten ..... 53.
M.O.H. ..... Secretary of school.

Victorian Order Home—Whitby.

Matron and manager ..... Miss Bain. Salary $75. per month.
Acts as School Nurse, Public Health Nurse, also for accouchements.
Two rooms for confinements.
Thirty confinements in home, 40 outside.

Havelock.

Population ..... 1,300.
Clerk ..... M. Lancaster.
L.B.H. ..... Reeve W. Jones, H. Faulkiner, and M.O.H.
M.O.H. ..... Dr. Holdcroft. Salary $100., $25, and expenses for attending annual meeting.
S. Inspector ..... P. McAndrew. Constable.
Water ..... All wells.
Sewage ..... Pit closets, but have a By-law to abolish these, but not enforced.

No contagious diseases at present.
Advised boiling water from all contaminated wells, also chlorinate.
Wells will never be safe until all pit closets are abolished. Strongly advised enforcing By-law re Pit Closets.

Havelock School—North Hall.

Building ..... Frame, cement veneer. South cement block, two storey.
Eight class rooms, eight teachers.
Pupils ..... About 300 pupils.
Heated ..... By steam.
Ventilated ..... By windows.
Closets ..... Cement pits outside.
Sixteen seats for boys. 16 seats for girls.
Teachers have separate closets.
All cement boxes.

Peterborough Filtration Plant.

Five beds in operation.
Each bed filters 1 million gallons in 24 hours.
Reservoir, 2 million gallons.
Two coagulating basins, outside. Eight thousand gallons. Sulph.
Alum for precipitant, 1 grain per gal.
Chlorinated 2 lbs. to 1 million gallons.

Inspected Restaurants.

328 George Street, Peterborough. Dominion Cafe. All in good condition, and cellar clean.

162 Simcoe Street. Classic Cafe. All good. Cellar.

415 George Street. Paris Cafe. Good. Cellar also good.

394 George Street. Home Lunch. Lunch counter and cafe. Cellar and room clean.

Nashua Paper Company, Peterborough.

Manager	R. A. Brown.
Employ	Forty men, 10 girls.
Manufacture	Waxed and gum paper.
	Sanitary closet provided for females, separate.
Water	Use paper cups, from city supply.

Colonial Weaving Company, Peterborough.

Manager	Wm. Hartley.
Manufacture	Labels, trimmings, narrow patterns for trimming.
Employ	Six men, 30 girls.
Sewage	Two Fl. closets for girls.
	Two Fl. closets for men.
Water	From city.
	One drinking fountain

ANNUAL REPORT FOR 1921 OF DISTRICT No. 5.

Dear Sir:

I have the honour herewith to submit my annual report for the year 1921, of my work in District No. 5.

This district has a population of 326,958 people, and includes the counties of Dundas, Stormont, and Glengarry, Leeds and Grenville, Frontenac, Lennox and Addington, Lanark, Renfrew, Carleton, and the City of Kingston.

Since the head office of the district was transferred from Cornwall to Ottawa, in 1920, it has been utilized to a much greater extent than formerly, owing to the convenient situation and the excellent railway and road communications. Concurrently with the extension of work needing visits to a specified locality, the office correspondence has greatly increased, communications now exceeding two thousand per year. While mostly every day and sometimes many times a day communications have been had by telephone with Health Officers, Boards of Health, and others, regarding sanitary and other matters pertaining to the work of the district.

The automobile supplied to the district officer by the department has enabled him to accomplish a much larger amount of work during the suitable season, than formerly, and this feature of the work will be greatly amplified, as the good roads system is extended.

The district has been thoroughly inspected in a routine manner during the year, especially the Public Institutions.

Public Institutions.—A report on their sanitary condition has been filed with the department and also, when thought advisable, a special report has been sent to their governing bodies. The requests for the elimination of unsanitary conditions or for the installing of needed improvements have generally, but not in all cases, been promptly complied with by those in charge of the management. The following Public Institutions are referred to:

Asylums.

Brockville, Kingston, (Rockwood).

Hospitals.

Kingston.—General, Hotel Dieu, Mowat Memorial.
Brockville.—General, St. Vincent de Paul.
Cornwall.—General, Hotel Dieu.
Smiths Falls.—General (St. Francis), Public.
Renfrew.—Public.
Pembroke.—General, Cottage.
Almonte.—V.O.N. Hospital.

Houses of Refuge.

Kingston.—House of Providence, County House of Refuge.
Leeds and Grenville.—House of Refuge, Athens.

Dundas, Stormont, and Glengarry. Cornwall.—House of Refuge: St. Paul's Home.
Lanark, Perth.—House of Refuge.
Prescott and Russell, L'Orignal.—House of Refuge.

County Jails.

Kingston, Napanee, Brockville, Cornwall, L'Orignal, Perth, Pembroke.

Orphanages and Children's Aid Shelters.

Kingston, Napanee, Brockville, Cornwall, L'Orignal, Perth, Pembroke.
Brockville.—Old Ladies Home, Children's Aid Shelter.
Cornwall.—Nazareth Orphanage.
Renfrew.—Children's Aid Shelter.

Summer Resorts.

This end of the Province is well supplied with Summer Resorts, which cater, not only to Canadians, but to an increasing extent to the United States tourists. All these resorts have been carefully inspected during the year and while far from being up to the desired standard in sanitation they show each year an improvement on the preceding year. The local M.O.H., and local sanitary inspectors are taking a more lively interest in conditions than formerly, but the influence, having the most weight is that from the summer residents themselves, who rightly claim that the chief benefit they derive from the municipal taxation is the sanitary supervision of the waters and cottages by the local inspector.

The principal summer resorts are: Thousand Islands; Rideau Lakes chain, including Portland, Chaffey's Locks, and Jones' Falls; Lower St. Lawrence, including Stanley Island, Hamilton, and Colquhoun Islands; Christies Lake; Charlton Lake; and the numerous summer resorts along the Ottawa River.

Communicable Diseases.

No severe outbreak of communicable diseases has occurred in this district during the year. Smallpox of a mild type occurred sporadically, but was in most cases quickly brought under control by the Local Boards. The exceptions were in the vicinity of Verona, Battersea, and Seeley's Bay.

Owing to the continued increase in the number of persons vaccinated, this end of the province is now better protected in regard to Smallpox than for many years past. Scarlet Fever outbreaks are still of the very mild type and for this reason very hard to control. Diphtheria, Typhoid Fever, and the other notable communicable diseases were much below the average.

The splendid service rendered to local Boards of Health and physicians by the Provincial laboratories and the bountiful supply of first class Biological products by the Provincial Board is highly appreciated and was a prominent factor in the good results apparent for this year.

Cemeteries Inspection.

By Order-in-Council 31st May, 1921, district officers were appointed inspectors of cemeteries for the purposes of the Cemeteries Act. Considerable work was done since the above date in connection with the inspection of cemeteries. It was, however, found that the number and the difficulties connected with the

ownership were much greater than expected. Already 588 cemeteries have been located with 17 municipalities not yet reported. I do not think it would be possible to properly inspect and enforce the regulations concerning these cemeteries without the district officer neglecting his usual work.

V.D. Clinics.

A clinic has been established at the Water Street Hospital, in Ottawa, which should prove of very great service, owing to its central location. The clinic in connection with the Kingston General Hospital has, unfortunately, temporarily closed.

At least four such clinics could be established advantageously in this district, so as to enable the Health Officers and the Medical men to thoroughly grapple with conditions existing.

Health Nurses.

The two Public Health Nurses working in connection with the Division of Maternal and Child Welfare of the Provincial Board of Health have given during the year demonstrations at Smiths Falls, Perth and Lanark. Their work in the above mentioned localities, it is hoped, will pave the way for the appointment by the municipalities interested of permanent Public Health Nurses, paid and controlled by the local authorities under the supervision, at least to a certain extent, of the Division of Maternal and Child Welfare.

Miss Meiklejohn, who had done excellent work overseas as well as in this district, was induced by the New Brunswick Health authorities to take charge of this Division in that province. Ontario loses a very excellent member of the Public Health Nursing staff, while New Brunswick has secured a head for the new division of Child Welfare who is sure to make it a success.

Miss Olive Gipson, Public Health Nurse, in charge since the inception of the work in this district, had proved herself perhaps one of the most efficient school nurses in the province and she has demonstrated in Smiths Falls and Perth the benefits to be derived therefrom with marked ability. The County Council of the County of Lanark has requested the Provincial Board to have Miss Gipson and her associates give a demonstration of County Public Health Nursing before the June session of next year. At this meeting the Council will come to a conclusion as to whether they should appoint permanent Public Health Nurses or not.

Among the more notable conditions, other than the routine inspections and outbreaks of communicable disease, requiring attention, and generally one or more visits with location are:—

Eastview.—Unsanitary conditions in connection with the town lock-up.

Gloucester Township.—Valiquette rendering plant.

Ottawa City.— Boards of Health, re the establishment of a Provincial laboratory.

Metcalfe.—Sewer difficulties.

Westboro.—Water and sewer installations.

Chesterville.—Contamination of the river by the condensary, also installation of sewer and water works.

Crysler.—Cheese factory nuisance.

Morrisburg.—Unsanitary barber shops.

Winchester.—Septic Tank nuisance, and sewer installation.

Bath.—Unsanitary residences.

Kingston.—Slaughter houses, etc., etc.

Pittsburg.—Unsanitary dwellings.

Westbrook.—Cheese factory.

Alexandria.—Unsanitary dump.

Westport.—Water supply.

Navan.—Unsanitary school.

Calabogie.—Drainage difficulties.

Renfrew.—Local nuisances.

South Lancaster.—Unsanitary conditions.

Cornwall.—Unsanitary conditions.

Finch.—Unsanitary hotel.

Lanark Village.—Establishment of cemetery.

Perth.—Water supply.

Smith's Falls.—Water supply.

Napanee.—Sewer system regulations.

Brockville.—Municipal piggery.

Elgin.—Septic tank nuisance.

Kemptville.—Charge against physicians for non-report of communicable diseases.

Casselman.—Slaughter houses.

Plantagenet.—Installation of a water supply.

Rockland.—Water supply and sewers.

ANNUAL REPORT FOR 1921 of DISTRICT No. 6.

North Bay, Ont., Jan. 1st, 1922.

To the Provincial Board of Health, Ontario.

From W. Egerton George, M.D., District Officer of Health.
District No. 6, North Bay.

Comprising the Districts of Temiskaming, Nipissing, Parry Sound and that portion of the District of Sudbury, lying to the East of a line drawn Northward from the Eastern boundary of the District of Manitoulin.

The fact that Health Districts No. 6 and No. 7 were divided so as to make an additional Health District has added greatly to efficiency and has improved the supervision of each of these Districts; not only by the addition of the time spent in those sections which were cut off, but by the addition of a great deal of time lost in travel. The Chief of the Department is to be congratulated on this measure of relief which he has obtained for New Ontario and it is to be hoped that his continued effort will be rewarded by further adding to this section of the Province one or two more District Officers. The unorganized territory must look entirely to the District Officers for its health supervision and its sanitary inspection. Nuisances which are reported from there frequently must be satisfied with a letter from that officer demanding the removal of the danger, as time prevents the personal investigation necessary to prompt correction. Because of the size of the Districts, the difficulty of keeping in touch with outlying sections and the excessive demands on the time of the District Officers, neither nuisances, cemeteries nor communicable diseases are receiving the attention they require. For these reasons, in lieu of the possibility of making this increase in the number of the District Officers I would again respectfully offer the suggestion, repeatedly made, that each of the District Officers be given a Sanitary Inspector to assist him in the investigation of unsanitary conditions, the inspection and supervision of cemeteries and in the placarding and police duty necessary to the control of communicable diseases.

During the year I travelled 21,692 miles at an expense to the Department of $1,189.59 including the expense of upkeep and running car.

The car has opened such a number of new lines of communication and travel, has brought me in touch with so many local officials who could not otherwise have been seen; has made accessible to personal attention the problems of the vast rural sections of Parry Sound, Nipissing and Sudbury, and has so well supplied the two essential factors of speed and economy that I feel that it is deserving of this passing notice.

Early in the year when the laboratory was opened the office was transferred to the laboratory building. The centralization of offices has been the means of considerable saving in the duplication of phones, stenographers, etc. It has also been of benefit to the public who without further search find in one building every Provincial Official connected with the Health Department.

Medical Officers of Health.

The salaries paid by towns, villages and townships is very inadequate, and the work is suffering seriously because of this want of remuneration to the Health Officers. The deficiency which was so admirably set forth in Dr. Robt. E. Wodehouse's paper, read before the Health Officers convention last May, has been verified by personal investigation within the District. I have used every opportunity to encourage municipalities to pay more for the service of the Health Officers. During the year, Dr. Cook, of Sudbury, appealed to the Judge for a decision as to what was a reasonable salary and I am pleased to report that the Judge found it necessary to raise it from $600 to $1,500. If we are to have efficient supervision of communicable diseases, tuberculosis, venereal diseases, child welfare, milk, water, sewers, and nuisances, backed by proper statistics and health education there will have to be a change in the proportion of taxes used for public health purposes. Towns of the size of North Bay which should have a health budget of $7,500 to $8,000 are providing from $4,000 to $5,000. How can we expect the health officials to pay out of their own pockets for what ought to be done?

Communicable Diseases.

Below is a list of the Communicable Diseases reported within this District for 1921.

Diseases	Cases	Deaths
Small-pox	222	0
Scarlet	112	6
Diphtheria	170	24
Measles	250	3
Whooping Cough	5	0
Typhoid	57	12
Tuberculosis	8	13
Infantile paralysis	0	0
Meningitis	1	3
Influenza	65	1
Influenzal Pneumonia	2	12
Acute Primary Pneumonia	0	8

Smallpox.

There were no less than thirty municipalities within the District that reported smallpox. Undoubtedly there were many more cases not reported than were reported. There were hundreds of cases in unorganized districts and practically none of these cases were reported at all. There is no provision for getting statistics in the unorganized municipalities. It is interesting to note that there were no deaths. The mildness of the outbreak is slowly removing the fear of the disease. However, the general prevalence caused many hundreds to be vaccinated. Those municipalities which reported the most cases were invariably found to be those that have made the greatest efforts to stamp it out.

This is indicated by the fact that no great number were reported at one time, but one or two were found each week over a considerable time, until the disease disappeared. It was often only by the most careful follow-up work that mild, unrecognized, unreported cases were discovered and prevented from perpetuating the disease.

Scarlet Fever.

Seventeen municipalities reported Scarlet Fever. The disease was unusually mild. Many cases did not have a rash; these were not recognized, thus explaining the prevalence and the difficulty of stamping it out. The most serious epidemic occurred in Burk's Falls where it extended into the surrounding townships. In the country districts little care was taken to prevent its spread. Since the patient was sick but a day or two the doctor was not called. The disease slowly advanced in the rural sections from which places the town was reinfected over and over again.

Diphtheria.

Twenty-five municipalities reported Diphtheria. Like smallpox and scarlet fever the disease was very mild. Many cases did not have a membrane. In the townships between North Bay and Mattawa there were actually hundreds of cases with but a very few reported. The disease went through family after family without any deaths. When it was thought necessary to call the doctor his efforts were almost useless and the patient died. It was rare for the physician to be called during the first week of the illness. Diphtheria is still prevalent in the section about Bonfield. The Health Officer is making strenuous efforts to get it under control, with not too encouraging results. At Sturgeon Falls and in the township of Springer there was another extensive outbreak, very similar to the one described. Indeed, it seems to have been carried from the townships before mentioned. There were 15 cases reported from the town of Sturgeon Falls and twelve from the township of Springer. When an investigation was made it was found to have infected family after family. The symptoms were exceptionally mild; rarely did a family recognize the disease, and when they did it was after one of its members began to go down hill. It is important to recognize the fact that the history of these epidemics has been, that information regarding them was delayed in reaching the District Officer. At Sudbury and Burk's Falls there were outbreaks of the same mild character. In the township of Bucke occurred the most severe outbreak of the year. They reported ten cases and seven deaths. I believe all of these that died did not have a physician until late. The severity of the outbreak brought all new cases to the attention of the Health Officer who had no difficulty in preventing further spread.

Measles.

Practically the only epidemic of Measles occurred in the town of Parry Sound which reported 215 of the 250 cases returned. There were no deaths from Measles reported outside of those from that municipality. Note that of seven deaths that took place in Parry Sound from communicable diseases, three were from Measles.

Whooping Cough.

There was no epidemic of this disease reported. Only once before my tenure has this occurred. The importance of the fact should be reflected in the infantile death rate as whooping cough produces its highest mortality in the first year of life.

Typhoid.

Sudbury, Haileybury, Parry Sound and Byng Inlet were the worst offenders with regard to the prevalence of this disease. All of these places have unenviable records. Sudbury gave returns of deaths only, so that we have no idea of the number of cases that really occurred, except by analogy from the number of deaths. There are returns of eight deaths. Haileybury gives twenty-eight cases with one death. I have reason to believe that there were about eight deaths. Parry Sound reported 11 cases and one death while Byng Inlet reported four cases. It must be said for the Health Officer of Haileybury, Dr. Gordon F. Jackson, that he urged the council to install a liquid chlorine plant to supplement their filters, even going so far as to offer to raise for the council half of the cost. Dr. Jackson is to be commended for the attitude he has taken and if action is further delayed by the council I would strongly advise that a mandatory order be issued to the town by the Board. In Sudbury they have a Wallace and Tearman liquid chlorine apparatus but apparently the dosage has been kept too low or there is not adequate mixing of the chlorine with the water. At Parry Sound they still continue with a chloride of lime system but there seems to be great variation in the chloride content of the lime.

Tuberculosis.

I regret to have to report year after year more deaths from this disease than cases returned. Health Officers seem loath to order the dangerous and open cases to a sanitarium, even when it has been shown that they are a serious menace to the family.

Infantile Paralysis.

This is the first year that I have not had a case of this disease reported.

Meningitis.

There seems to be serious neglect somewhere when there are more deaths than cases reported.

Influenza and Influenzal Pneumonia.

It is very gratifying to see how the virulence of this disease is petering out. Pneumonia complications seem as dangerous as ever but the proportion of those developing pneumonia is small and the incidence of the disease much less.

Acute Primary Pneumonia.

Although there were returns for eight deaths from this disease there were no cases reported. It is apparent that efficient reporting of pneumonia cases will be of slow growth.

Venereal Diseases.

Requests from physicians for information regarding free treatment of venereal diseases have frequently been received during the past year. For their enlightenment I had this discouraging information that at no place within this Health District was such administered. Physicians, in my opinion, may be

excused for not wanting to add venereal diseases to their charity work. I believe the prevalence of these diseases requires some additions to the admirable efforts that already have been made by the Provincial Board of Health to cope with them. Where there are such large sections without service to the free clinics that have been established in municipalities over 20,000 others should be supplied by the Board; if not on the conditions agreed to by the larger municipalities, then on the best terms that can be arranged. Possibly a travelling clinic such as has been suggested by the Director of the Division will be found most suitable to the needs of the country.

Enlarged Thyroid Gland.

At North Bay and to the South and East of that place the prevalence of goitre is very noticeable. Dr. Dafoe of Callander has a record of about 1000 cases. The Disease occurs about puberty and in a very large proportion of children, where in certain sections there are between 60 per cent. and 75 per cent. affected. Quite a number of cases develop exopthalmic symptoms. The theory that the disease is due to a deficiency of lime would seem to be substantiated here as the laurentian granite which runs from the St. Lawrence River through the North Bay region and Westward into New Ontario, carries very little lime. I would advise that the Department investigate the prevalence of enlarged thyroid in those sections of Ontario where this rock appears and where the population is above a certain standard number per square mile. The treatment of all children between 11 and 17 years with potassium iodide twice yearly, with about 30 grains each treatment might give us the satisfactory results obtained elsewhere. The treatments usually extend over a month, Spring and Fall. I feel sure that this branch of preventive medicine or preventive surgery is deserving of most careful consideration and I would strongly commend it to the attention of the Provincial Board of Health.

Public Health Nursing and Child Welfare.

Up to the end of the year demonstrations by the two Provincial Public Health Nurses attached to this District have been carried on in four municipalities, Timmins, Township of Tisdale, Sturgeon Falls and Sudbury, in the order mentioned. At the end of the demonstration in the Township of Tisdale the Director of the Division of Maternal and Child Welfare thought it advisable to transfer Miss Micklejohn to District No. 5, as it was essential to have a nurse in that District who could speak French. Miss Halley who came to us from District No. 5 brought with her a knowledge of School Nursing which strengthened the weakest side of our forces. From this time the demonstrations were continued by Miss Linton and Miss Halley. One cannot pay too high a tribute to the self-sacrificing devotion to the public service by these nurses, including Miss Micklejohn.

The evidence collected by the Provincial Nurses convinced the councils of three of the municipalities that Community Nurses were essential to the protection of the babies and children from the pitfalls which beset the pathway of life and health. In two of the municipalities, Timmins and Sturgeon Falls, the School Boards co-operated with the Local Boards of Health in supporting the scheme for the securing of a nurse. It is pleasing to report, further, that the Public Health Nurse in each place has undertaken School Nursing, thus bringing under the Board of Health the valuable information gained from this branch of the service. The division of authority which our Provincial Law provides has not proven to be an unmixed blessing. It is most encouraging to

see the local authorities co-ordinating to the purpose of improving the service from the standpoint of efficiency and economy. What greater proof could be offered to the Government that the divided authority of the present legislation is wrong, when local authorities are seeking by co-ordination (the only opening left to them) to unify the control in the interests of efficiency and economy.

It is to early to make any general observations from the results of the efforts of the Community Nurses.

At the present time Miss Halley is making a demonstration in North Bay and I am hopeful that the evidence she is collecting will take such hold of the council that this town will be added to the rapidly increasing list of municipalities which represent the forces for the saving of the babies and for the remedying of those defects of children which make for adult physical unfitness.

Laboratory.

Early in the year a Public Health Laboratory was established by the Provincial Board of Health at North Bay. This is a bacteriological laboratory only: no chemical analyses are carried on. The staff consists of a capable director, an assistant and a stenographer. The laboratory is a depot for the Northern Districts and carries a full stock of vaccines for small-pox, typhoid and whooping cough, and serums for diphtheria, meningitis and tetanus.

The great advantage to this section of the Province is the time saved in getting specimens and reports to and from the laboratory; also the time saved in getting delivery of serums and vaccines. We have histories of several cases during the year where this saving of time has apparently saved a life.

Typhoid carriers have been discovered and efforts made to protect the public from this subtle source of danger. Diphtheria carriers have been found, one of which did not have any record of having the disease. Water supplies have been found polluted, not least of which is the North Bay supply. This water has usually been considered safe in the Winter time but this year intestinal bacteria have been found to an unsafe degree in nearly every sample.

The great need is to get physicians to make fuller use of the facilities provided: to get Boards of Health to keep proper supervision of their water supplies by frequent sampling: to get the public to interest themselves in the institution and to show some appreciation of the protection it affords.

Milk.

Municipal milk supplies have not had the attention they deserve. The town which received the greatest amount of supervision is Iroquois Falls but only after there had been quite a severe outbreak of dysentery. However, it is pleasing to report that the Health Officer, Dr. Donnely, was able to use this epidemic as propaganda so effectively that he now has a splendid new pasteurizer which will prevent a repetition of the occurrence. Dr. Donnelly received the full support and help of this office both in the investigation of the outbreak and in his request for a pasteurizer.

Haileybury and Cochrane had some slight trouble with their milk. As the trouble was not continuous an investigation of the conditions under which the milk was being produced failed to reveal the cause. Undoubtedly it was due to some slip in the technique.

It is surprising now that the value of pasteurizing is everywhere admitted that there are but four plants in this District. Sudbury has one and North Bay two. Not nearly all the milk of these two places is pasteurized. The fourth is located, as above stated, in Iroquois Falls.

Water Supplies.

Although there were no new installations (municipal) during the year, yet measures were adopted by two municipalities toward rendering safe the supplies which bacterial analyses had indicated to be impure. Sturgeon Falls which formerly obtained its supply from the Sturgeon River, just above the dam of the Spanish River Pulp and Paper Company's mill, found that there was serious danger from river pollution by that portion of the town above that point. They accordingly removed the intake to a point on the river well above the corporation limits. The pumping instead of being done by the Paper Company will in future be carried on by the town.

Timmins obtains its supply from the Metagami River. The water has frequently been found polluted. It is well known that a number of companies are operating lumber camps above the town. For the reasons given a Wallace and Tearman liquid chlorine apparatus was installed under the direction of the Board of Health. The chlorine is discharged into the pump well directly in the current of the intake from the river.

Haileybury, Sudbury and Parry Sound, Cochrane, North Bay and Byng Inlet are known to have polluted supplies. Haileybury, Sudbury and Parry Sound have partial treatment. Haileybury requires to augment the efficiency of their filters by chlorination. In Sudbury there does not seem to be a variation in the quantity of chlorine being used to meet the variation of the quantity of water being pumped. Parry Sound uses a chloride of lime plant. This has proven unsatisfactory because of the variation of the chlorine in the chloride of lime. Cochrane has two sources of supply—springs and a lake. The lake water needs to be chlorinated. Water taken from the taps in North Bay shows bacteria of intestinal origin consistently in from 5 to 25 cc's. That this should be present in the Winter time indicates to me that the water is not coming from 650 feet out in the lake. I am suspicious that there is a break in the intake pipe and that they are really getting shore water. An effort will be made to prove or disprove this. Byng Inlet requires chlorine to render their water safe.

Sewerage and Sewage Disposal.

The only efficient disposal system in this District was completed toward the end of the year in Timmins. This was made necessary because of the fact that the only place available as an outlet for the Timmins sewers is the Metagami River. The river is used farther down as a water supply for Smooth Rock Falls. The disposal plant is of the activated sludge type and is supposed to be the last word in sewage treatment. We hope that when it gets into operation it will prove to be as effective as its designers anticipate.

At Haileybury the effluent from their septic tanks reaches the lake at a point about one thousand yards from the mouth of the intake of their water supply. At times the pollution of the water is so great that bacteria of intestinal origin are found in from 5 to 25 cc's. in the taps after it has passed through the filter. I feel sure that the effluent from the septic tanks must account for this by occasionally reaching the intake in more or less concentrated form.

Toward the end of the year the T. & N. O. Railway indicated their intention to extend their line to Oil Can Portage on the Abitibi River about 68 miles north of Cochrane. Two grave problems immediately presented themselves, first, the use of this water by the construction gangs, second, the water is known to be seriously polluted by the Iroquois Falls sewerage. We will make every effort

to warn construction companies against the use of this water and to encourage them to insist on the vaccination of their men against typhoid. Iroquois Falls has an order for the construction of a sewage disposal plant which it will be necessary for them to complete at an early date. I would advise that the Department order Iroquois Falls to proceed immediately with its construction.

At Sturgeon Falls a trunk sewer has been built to connect up their many outlets into the river. The outfall will be carried well below the town.

The very heavy claims of the Roman Catholic College at North Cobalt against the town of Cobalt and the Township of Coleman for the pollution of Mill Creek was settled out of court.

The fact that Parry Sound discharges its sewerage in Seguin River just before it empties into the harbour has frequently been reported upon. The current at times goes out through the gap and travels down the shore over their intake pipe. There seems to be no other explanation of the serious pollution frequently found in their water. The building of a trunk sewer to connect up their many outlets and carry to one point for treatment is met by engineering difficulties and expense which is prohibitive.

Publicity and Public Health Education.

During the year every opportunity has been seized to appease the popular desire for information on matters concerning Public Health. Pamphlets have been distributed and a number of lectures given. Efforts have been made to make the District Office a bureau of authentic information available at all times to municipalities and to the public. If we have not the data required we secure it if possible. The public should not be left to get information from charlatans or unreliable sources. Municipal authorities need frequent reminders when their health expenditures are relatively small. For unless this is carefully supervised effective health endeavour fails.

Vital Statistics.

As mentioned in several previous reports it is a matter of regret that birth and death statistics are not available to the District Officers. The absence of this data seriously interferes with his efficiency. When the communicable returns were first sent to them these officials soon discovered many local Secretaries of Boards of Health who were neglecting their duty in sending these returns. In fact, not infrequently one is still found who is ignoring this responsibility. It is the opinion of this office that birth and death returns in the hands of the District Officers would make important discoveries, as well as make available data upon which they could judge the progress and improvement from year to year.

Housing.

Timmins, North Bay, Kirkland Lake, Cochrane and Sudbury are growing very rapidly and although a large number of houses were built in each place this was not sufficient to accommodate the numbers who have been crowding into these towns. Efforts have been made to prevent the extra numbers from occupying too limited a section. It would be most interesting if reliable figures could be obtained as to the extent of building operations, but Health Officers are notably deficient in such information.

Annual Reports of Medical Officers.

Let me repeat the suggestion contained in my 1919 report that the Provincial Board supply Health Officers with an outline setting forth the material which it will be incumbent on them to supply in their annual reports. The Health Officers should be given plenty of latitude in matters of local importance but his annual reports are required to be greatly changed if they are to fill the important purpose intended by the Department and if they are to be of value to the neighbouring communities who are working too much in isolation. In this way data can be collected upon which may be based legislative changes. I would suggest that a request be made for the number of houses built and that a report of the investigations into the source of every communicable disease be asked for.

Respectfully submitted.

W. Egerton George,
District Officer of Health.

City Hall, Fort William, Ontario,
February 20th, 1922.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 7.

Subject:—"*Annual Report for* 1921.".

Sir:—

I have the honour to submit herewith my report of work done in District No. 7, during the year 1921:—

Conference.—During the months of February and November, I attended special Conferences held at the Toronto offices of the Provincial Board. Periodic conferences at Headquarters are extremely useful, to Officials who are out in the field during the entire year. The peculiar needs and conditions prevailing in Northern Ontario would appear to justify the holding of Conferences for Officials from Districts 6, 7 and 8, separate from those conferences for Officials from the Districts in the older parts of the Province.

On May 16th and 17th I attended the Annual Meeting of the Ontario Health Officers' Association. This meeting was held in Toronto in conjunction with the Annual Meeting of the Canadian Public Health Association, Canadian National Council for Combating Venereal Diseases and the Canadian Association for the Prevention of Tuberculosis. Six local medical officers of health from District No. 7 attended and registered at the Annual Meeting. As the majority of the municipalities in the District are from eight hundred to a thousand miles from Toronto, this was a very creditable representation from the District.

Cemetery Inspections.—I was notified by the Chief Officer of Health that the inspection of cemeteries had been added to the District Officers' duties; and I endeavoured to complete this work in all municipalities. Forty-five cemeteries were inspected during the year, including one cemetery in a township without municipal organization. Completed Schedules of Information re cemeteries in every municipality but one in District No. 7, were sent to the Provincial Board. Six written notices were sent to the owners of cemeteries, pointing out necessary improvements.

Industrial Hygiene Surveys.—The following surveys of Pulp and Paper Mills and Plants were completed: and reports were sent to the Industrial Hygiene Division of the Provincial Board:—

(1) Nipigon Fibre & Paper Mills, Limited, Nipigon, Ontario. Date of survey: August 22nd. Date of report: August 23rd.

(2) Dryden Paper Co., Limited, Dryden, Ontario. Dates of survey: August 26th and 27th. Date of report: September 3rd.

(3) Fort Frances Pulp & Paper Co., Fort Frances, Ontario. Date of survey: September 23rd. Date of report: October 14th.

Routine Sanitary Inspections.—Routine sanitary inspections were carried on in fifteen municipalities; and reports were submitted to the Provincial Board as follows:—

Municipality	Dates of Inspections	Dates of Rept's
(1) Port Arthur	March 23rd to April 8th	April 15 & 18th.
(2) Shuniah	June 29th & July 6th	July 4th & 15th.
(3) Schreiber	August 4th	August 5th.
(4) Emo (5) Lavelle (6) Chappele	August 11th to 13th	August 16th.
(7) Dryden (8) Van Horne	August 25 to 8th	September 6th.
(9) Kenora	August 28th to 31st	September 7th.
(10) Keewatin	August 31st	September 7th.
(11) Ignace	September 15th	September 19th
(12) Fort Frances	September 21st to 25th	October 4th.
(13) Rainy River Tn.	September 25th to 28th	October 6th.
(14) Morley	September 27th	October 7th.
(15) Sioux Lookout	September 28th to October 1st	October 7th.

In each municipality I was accompanied by the local M.O.H., or Sanitary Inspector; and wherever possible I met the local Boards of Health.

In the City of Fort William I inspected—between April 25th and May 12th—the City Abattoir, City Incinerator, "Coal-Dock Area," and seven Dairies. I was accompanied on these visits by the local Sanitary Inspector.

Special Visits and Inspections.—Ten special visits and inspections were made during the year; and reports were submitted to the Provincial Board, as follows:—

Community.	Dates of Inspections.	Dates of Reports.
(1) Stratton	April 19th	April 22nd.
(2) Fort Frances	April 20th	April 22nd.
(3) Atikokan	April 20th	April 22nd.
(4) Nipigon	May 31st to June 1st	June 3rd.
(5) Sand Point (Indian Reserve)	June 15th	June 17th.
(6) Macdiarmid (Thunder Bay District).	June 15th	June 20th.
(8) Ontario Government Road Camps. (Thunder Bxy District).	July 18th and 19th	July 20th.
(9) Nipigon and Cameron Falls	July 16th	July 21st.
(10) Kenora, Keewatin, Rainy River Town, Fort Frances, Port Arthur	October 17th to 22nd	October 28th.

Dairies.—Twenty-seven dairies—including three pasteurizing plants—were inspected as follows:—

Port Arthur	5	(including one pasteurizing plant.)
Fort William	7	" " " "
Kenora	11	" " " "
Keewatin	1	
Fort Frances	2	
Schreiber	1	

The equipment varied to a considerable degree; but not to the same extent as the sanitary conditions. Local health authorities should require a more rigid observance of sanitary regulations; but it is doubtful if inspection alone will guarantee milk of the highest standard of purity.

In the larger communities municipal milk depots and pasteurizing plants—if properly equipped and operated intelligently—may be productive of a safe milk supply. However, I would say that, in the three pasteurizing plants inspected, I could find nothing to prove by mechanical means that any particular batch of milk was effectively pasteurized and subsequently cooled to the proper

temperature at which it should be maintained until delivered to the consumer. I would recommend that it be made illegal for any person or company operating a dairy to advertise pasteurized milk unless the particular apparatus and process has been efficiently endorsed by the local Board of Health of the municipality after inspection of same; and unless the Officials of the local Board of Health shall have sole access to the recording apparatus and time-clocks in connection with the pasteurizing plant. I would further recommend that it be made illegal to offer for sale pasteurized milk unless every bottle of this milk be labelled as such, stating the degree of heat and the length of time; and the date on which the process was done.

Water Supplies.—I have continued the policy of encouraging local health authorities to maintain stricter supervision over municipal water supplies. During 1921 390 water samples were examined bacteriologically in the Provincial Laboratory at Fort William; and practically all samples were from municipalities in District No. 1. This is a very gratifying increase over the previous year when 53 samples were examined.

On May 31st and June 1st, I inspected the watershed from which the supply is obtained for the Village of Nipigon. This water supply was found to be subject to gross pollution; and I recommended in my report of June 3rd, that the Provincial Board send a Sanitary Engineer to look over the local situation. On July 16th, Mr. G. A. H. Burn, from the Sanitary Engineering Division, visited Nipigon and Cameron Falls. It is imperative that pressure be brought to bear upon the Municipality of Nipigon to ensure a safe water supply for the village.

During the summer months I visited the summer resorts of "Loon Lake" and "Amethyst Harbour," in the Municipality of Shuniah. I was accompanied by the local M.O.H., Dr. C. N. Laurie, and by Mr W. C. Miller, Provincial Sanitary Inspector. Mr. Millar also visited the "Silver Islet" summer resort in the unorganized Township of Sibley. Bacteriological examinations of water samples from the three summer resorts have demonstrated the necessity for stricter supervision over all water supplies at places of this nature.

On August 4th—when making an inspection at Schreiber—I suggested to Dr. H. S. Crowe, M.O.H., that the local Board of Health carry on a sanitary survey of all wells, cess-pools and pit closets in the municipality. Between August 17th and November 30th the M.O.H., and Sanitary Inspector collected sixty-eight water-samples from wells in Schreiber. These samples were examined bacteriologically in the Provincial Board's Laboratory at Fort William.

Water Chlorination.—During the months of January, February and March, tap-samples of presumably chlorinated water from the Port Arthur Municipal supply were found to be dangerously polluted with Colon Bacilli. On investigation it was discovered that the dosage of chlorine was being delivered at a figure far below that previously recommended by the chemist in charge of the Provincial Board's Experimental Station in Toronto. Dr. C. N. Laurie, M.O.H., immediately ordered that the Chlorine dosage be increased to 0.4 parts available Chlorine per million parts water. Since then no tap-samples from the Port Arthur municipal supply have shown pollution with Colon Baccilli.

Inspections of municipal chlorinating plants in the towns of Kenora, Rainy River and Fort Frances had given rise to doubt as to the efficiency of the processes employed. Bacteriological examinations of presumably chlorinated water from each town had almost invariably indicated pollution with Colon Bacilli; and I recommended that the Provincial Board send a Sanitary Engineer to

investigate the conditions. Between October 17th and 22nd inclusive, I accompanied Mr. A. E. Berry, Assistant Provincial Sanitary Engineer, on visits of inspection to Kenora, Rainy River, Keewatin, Fort Frances, Port Arthur and Fort William. At Kenora, Rainy River and Fort Frances it was found that the chlorinated lime solutions were not being added to the municipal supplies in sufficient amounts to render the waters safe for human consumption; and at each plant Mr. Berry left written instructions regarding the proper dosage.

Since then the few tap-samples received from Fort Frances and Rainy River have shown little or no improvement; between October 17th and December 31st, no tap-samples have been received from Kenora. I would recommend that the Provincial Board of Health make it compulsory for all municipalities—where chorinating plants are in operation—in District No. 7, to send tap-samples to the Provincial Board's Branch Laboratory in Fort William at least twice weekly throughout the entire year. Municipalities should be compelled to operate water-purification plants in such a manner that the "purified" water is at all times free from Colon Bacilli.

Sewage Disposal.—In Port Arthur, Fort William, Fort Frances and Kenora municipal sewage systems are in operation without any treatment of the sewage previous to discharging it directly into nearby waters. Most of these waters are the sources of municipal water-supplies; but economic consideration will apparently operate for some considerable time against any attempt to remedy these unsatisfactory conditions. However, as population increases, the problems of sewage disposal in these communities must become more pressing, and their ultimate solution cannot be indefinitely postponed.

Night Soil.—During the year some municipalities disposed of night-soil in a fairly efficient manner. In other communities the same care was not exercised; and the resulting conditions constituted a menace to health. However, local health officials have generally been willing and anxious to comply with any suggestions.

Communicable Diseases.—The following lists were compiled from the returns sent to this office from the Provincial Board of Health as received during the year 1921, from Secretaries of local Boards of Health, in District No. 7:—

Disease	Municipality	Cases	Deaths
(1) Smallpox	Dilke	4	0
	Emo	4	0
	Lavallee	6	0
	Fort Frances	1	0
	Kenora	3	0
	Fort William	8	0
	Port Arthur	1	0
	Total	27	0
(2) Scarlet Fever	Emo	14	0
	Fort Frances	3	0
	Keewatin	1	0
	Kenora	17	1
	Sioux Lookout	1	0
	Paipoonge	4	0
	Shuniah	2	0
	Schreiber	3	0
	Fort William	133	4
	Port Arthur	43	0
	Total	221	5

Disease.	Municipality.	Cases.	Deaths.
(3) Diphtheria	Rainy River Town	15	1
	Dilke	1	0
	Morley	12	2
	Emo	5	1
	Keewatin	4	0
	Kenora	1	1
	Sioux Lookout	4	0
	Shuniah	5	1
	Fort William	54	2
	Port Arthur	21	1
	Total	125	9
(4) Measles	Fort William	24	1
	Port Arthur	30	0
	Total	54	1
(5) Whooping Cough	Emo	2	0
	Schreiber	23	0
	Fort William	95	2
	Port Arthur	32	0
	Total	125	2
(6) Typhoid Fever	Rainy River Town	5	1
	Emo	1	0
	Fort Frances	1	0
	Keewatin	1	0
	Kenora	2	0
	Paipoonge	2	0
	Fort William	10	0
	Total	22	1
(7) Tuberculosis	Kenora	2	1
	Fort William	15	6
	Port Arthur	3	6
	Total	20	13
(8) Infantile Paralysis	Fort William	6	1
	Port Arthur	4	0
	Total	10	1
(9) Meningitis	Port Arthur	0	1
	Total	0	1
(10) Influenza	Schreiber	62	0
	Fort William	0	1
	Port Arthur	0	1
	Total	62	2
(11) Influenzal Pneumonia	Schreiber	1	0
	Total	1	0

Disease.	Municipality.	Cases.	Deaths.
(12) Acute Primary Pneumonia	Fort William	55	9
	Port Arthur	1	0
	Total	56	9
(13) Bronchial Pneumonia	Paipoonge	1	0
	Total	1	0
(14) Mumps	Fort Frances	19	0
	Shuniah	1	0
	Port Arthur	62	0
	Total	82	0
(15) Chicken Pox	Fort Frances	2	0
	Kenora	2	0
	Shuniah	10	0
	Schreiber	6	0
	Port Arthur	42	0
	Total	62	0
(16) Erysipelas	Schreiber	1	0
	Port Arthur	2	0
	Total	3	0

A small outbreak of Smallpox occurred during the Spring in Emo and Lavallee Municipalities in the District of Rainy River. The infection evidently came from the State of Minnesota; and the disease was kept well under control by the local officials. During the Spring four cases of Smallpox occurred in the Municipality of Dilke, in the District of Rainy River; and three cases occurred in the Town of Kenora. In the case of both municipalities the original infection was traced to a lumber camp near the south end of the Lake-of-the-Woods. In the City of Fort William during the month of July three cases of Smallpox were taken from the C.P.R. S.S. "Keewatin;" but the disease was kept well under control in that city.

Scarlet Fever cases have shown a distinct decrease, particularly in Fort William where the disease persisted in epidemic form during a period of three years.

In the Municipality of Morley and the Town of Rainy River outbreaks of Diphtheria occurred during the late Summer and in the Fall. Three deaths were reported; but the disease has since been brought under control.

Reports in connection with Measles show that we have been free from epidemics similar to those in Fort William and Port Arthur during 1920.

A number of cases of Typhoid Fever have been reported from Rainy River Town; and isolated cases have been reported from other points on the Canadian portion of the watershed of the Rainy River.

The origin of infection was evidently rural in most cases of Typhoid Fever occurring in the City of Fort William; and no case of Typhoid Fever in Fort William could be attributed to infection from the City Water supply.

A Sanatorium for cases of Tuberculosis is an urgent necessity in District No. 7. Even if available for advanced cases only, the main source of infection could be removed from homes where skilled attention would be out of the question financially.

During the year the following visits were made in connection with Communicable Diseases:—

Community	Dates of Visits.	Disease	Dates of Reports
(1) Quibell (Unorganized)	January 19th to 22nd.	Scarlet Fever	January 24th.
(2) Dorion "	March 2nd.	Whooping Cough	March 3rd
(3) Jackfish "	March 12th to 13th.	Smallpox	March 16th.
(4) Emo	April 19th.	Smallpox	April 22nd.
(5) Cloud Bay	September 17th.	Typhoid Fever.	Nil.

Venereal Diseases.—On July 11th-13th I visited the "Sand Point" Indian Reserve, on the shore of Lake Nipigon, where I obtained sixteen blood samples for Wassermann test. A report, dated July 15th, was sent to the Provincial Board.

On September 1st, a clinic for the treatment of Venereal Diseases was established at the McKellar General Hospital in Fort William. This clinic is under the auspices of the local Boards of Health of Fort William and Port Arthur; and it is intended to serve the north-western part of the Province. Skilled treatment for venereal disease is now available absolutely free of charge for all patients who are unable to pay for the services of a private physician.

Public Health Nursing.—Miss Carr Harris and Miss Whitworth have continued public health nursing demonstrations at (1) Kenora; (2) Emo and Lavallee; (3) Schreiber, Nipigon and Cameron Falls. Miss Carr Harris has recommended that a Provincial Public Health Nurse be appointed for the summer months in each of the four Agricultural areas. During seven months of the year it is practically impossible for a nurse to carry on an effective public health demonstration at points removed from the railway in the rural municipalities of this District. If public health nursing demonstrations are to be put on in the rural districts within a reasonable time, it will be necessary to provide additional nurses during the months when this work can be made effective; and I would recommend that Miss Carr Harris' suggestion be followed:—"that a Provincial Public Health Nurse be appointed during five months of the year in each of the four Agricultural Areas of District No. 7."

Public Health Laboratory.—This important health work has been carried on during the year by Dr. N. O. Thomas, the competent Director of the Provincial Board's Branch Laboratory at Fort William. Dr. Thomas, with one assistant, has done all the laboratory work; but it is evident that additional assistance must soon be provided if the Laboratory is to cope with the ever-increasing demands that are being made upon it.

Annual Reports from Local Boards of Health. I have received duplicates of the Annual Reports for 1921, from twenty-eight of the thirty-one local boards of health in District No. 7. This has been most gratifying as indicating the interest shown by the Secretaries in getting out their annual reports.

Provincial Sanitary Inspector.—During the year Mr. W. C. Millar took over from Mr. McKee the duties of Provincial Sanitary Inspector in District No. 7. Mr. McKee being moved to North Bay. Mr. Millar has on many occasions proved of invaluable assistance: and I believe that the most logical division of the routine sanitary work is that which allows the District Officer to give his attention to sanitary matters affecting municipalities, while the Provincial Sanitary Inspector deals with sanitary questions in territory without municipal organization.

Unorganized Territory.—According to literature printed in 1920, there are approximately eighty (80) townships appropriated for agricultural purposes and open for settlement in the Districts of Thunder Bay, Rainy River and Kenora. Approximately forty-three (43) of these townships are without municipal organization, and they possess no local health machinery such as exists in the thirty-one (31) municipalities in District No. 7. As settlement can only proceed in townships appropriated for agricultural purposes and open for settlement: and as these partly-settled unorganized townships are in fairly compact groups within reach of existing municipalities, some means can surely be found whereby certain local medical officers of health may be appointed (and paid) by the Department to act as local medical officers of health over groups of unorganized townships within reach of the municipalities at present under their jurisdiction. It is of the utmost importance that provision be made for local health supervision in partly settled townships where there is little probability of municipal organization in the immediate future. It is physically impossible for one official to perform effectively the duties of local M.O.H. throughout the entire extent of unorganized territory in the District; and at the same time to carry on efficiently in connection with the municipalities his duties as District Officer of Health.

Sanitary Inspection of Schools in Unorganized Territory.—The Provincial Board requires each local M.O.H. to make an annual sanitary inspection of every school in the municipalities under his jurisdiction, and to report to the Provincial Board the result of each inspection. According to the 1920 list of public and separate schools there are (in District No. 7.) approximately sixty to seventy-three school sections in territory without municipal organization: and where schools are open in these school sections they are not subject to inspection by any local M.O.H. I would recommend that the School Board of each school in territory without municipal organization be required once yearly to employ a legally qualified medical practitioner to make a sanitary inspection of the school and school premises, and to send to the Provincial Board a report of each inspection.

I have the honour to be, Sir, your obedient servant,

G. L. Sparks,
District Officer of Health.
District No. 7.

ANNUAL REPORT FOR 1921 OF DISTRICT No. 8.

DR. J. W. S. McCULLOUGH,
Chief Officer of Health,
Spadina House, Toronto.

Sir:

I beg to submit herewith annual report of Public Health work accomplished in this District for the year 1921.

District Number 8 comprises the judicial Districts of Algoma, Manitoulin and that part of Sudbury lying West of a line North and South through the West boundary of Township Number 59 on the South. This District was formed by taking Algoma and Manitoulin from District Number 7, and part of Sudbury from District No. 6, it having been found impossible for the District Officer of Health to cover the enormous territory formerly assigned to Districts Nos. 6 and 7. District No. 8 covers a section extending over 500 miles in which the District Officer's duties require his attention.

This new Health District was taken over on the first of the year 1921, with headquarters at Sault Ste. Marie. Offices were opened and furnished in the Beck Block and are also occupied by the Provincial Sanitary Inspector assigned to the adjoining territory. The Provincial Health Nurses also use this office as a central point from which to carry on their Public Health and Maternal and Child Welfare demonstrations throughout the District.

For carrying on any active Public Health propaganda it was necessary first to cover the District and to meet the physicians and Municipal authorities and the unofficial organizations interested in Public Health work. A considerable amount of time was spent in this way, where it is not possible to tabulate even approximate results. During the year it was possible to visit each Municipality in the area, and to meet all physicians holding appointment as M.O.H. in the forty Municipalities of the District.

Dairy Inspection.

During the Spring and early Summer and again in the late Fall about the time cattle were being stabled for the Winter, some sixty dairies supplying milk to the City of Sault Ste. Marie were inspected. Part of the milk supply is shipped by rail from points up to sixty miles distant. These shippers send their whole supply to a central distributor where pasteurization takes place before being delivered. Each shipper's supply is tested regularly for sediment and also regularly, though less frequently, samples are sent to the Provincial Laboratory for butter fat tests and a bacterial account is made. The supply shows good average tests for butter fat, but frequently the sediment test indicates the need for a decided improvement in methods of production.

Inspection of the dairy farms shows quite clearly the source of the dirt found. Except for a month or six weeks in the early summer the total supply of milk available for the city is not sufficient to meet the requirements of the public. It has therefore been difficult to force immediate compliance with the suggestions made as to improvements in methods of handling, particularly when such improvement means expense to the producer. Considerable general improvement, however, can be noticed after pointing out defects and offering suggestions as to better equipment and methods. As competition becomes stronger, it will be less difficult to secure co-operation in an effort to improve this supply.

The other part of the City's supply (about one-half) comes from those farms that are situated near enough for daily delivery by the individual producer. This supply is not pasteurized, but has the advantage of being delivered without the delay to which the supply from a distance must be subject before reaching the customer. In the case of two dairymen delivering directly to the city, after conferring with the M. O. H., it was considered necessary to shut off the supply until such time as improvements in methods and equipment were made. In one case the dairyman sold his stock and went out of business; in the other case the result of the action taken was that an excellent equipment was installed and the dairyman was producing a good supply under good conditions.

In the Spring of the year a beginning was made at gathering information regarding possible conditions affecting health in the manufacture of iron and steel.

A preliminary survey was made of the Algoma Steel Plant before attending a conference on Industry of Health conditions which conference was called by Dr. Cunningham, and was attended by all District Officers. It was not found possible to follow this investigation further than to see the method employed in conducting the Welfare stations, Sanitary Organizations and the methods employed in carrying on a most thorough and energetic "Safety" campaign. This "Safety" campaign was most interesting and stressed particularly the personal element, showing the "man" to be more liable to cause accident than the "machine."

Within the first three or four months of the campaign the operations were able to show a decrease of 75% in the incidence of accident, and a greater reduction still in the loss of time due to accident.

Cemetery Inspection.

Under date of May 31, 1921, the duties of Cemetery Inspector were added to those of District Officer of Health. In this District the time required to locate, inspect and report on 73 cemeteries had to be taken from time which it is considered could be more profitably spent in actual Public Health and Welfare work. In some instances it was possible to make these inspections in conjunction with other work in the more distant sections of the District, but as it was possible to make inspections only in the Summer, it was necessary in a large measure, to set aside a large portion of other activities which also require attention during the Summer months. This applies particularly to rural parts and settlements not convenient to the Railroad.

Communicable Diseases.

Communicable diseases in organized Municipalities have been officially reported in this District as follows:

Smallpox	37
Scarlet Fever	78
Diphtheria	121
Measles	4
Whooping Cough	10
Typhoid Fever	1

Of these cases seven deaths were reported due to Diphtheria and one due to Typhoid Fever. Figures not being available for previous years, it is not possible to make comparison of relative prevalence.

The regulations regarding reporting of communicable diseases from parts of the District outside the incorporated Municipalities have not been sufficiently complied with to have reliable data available to cover these areas.

In many cases physicians are not called until the death has to be registered, and it is difficult to ascertain even the approximate number of cases.

During the year there have been the following epidemics:

Smallpox

Aberdeen and surrounding Townships.

Epidemic began in the latter part of 1920. About 75 cases in all came to the attention of Mr. Taylor, Provincial Sanitary Inspector, who had charge of enforcement of quarantine regulations. General vaccination and thorough investigation of contacts cleared up the situation rapidly once it was located.

Sault Ste. Marie.

Approximately 35 cases in the city and neighborhood during January and February. Thorough vaccination in the schools helped to rapidly terminate the epidemic.

Diphtheria.

Prevalent throughout the District in the latter part of the year, appearing in isolated places in a very acute form. The history in a number of instances pointed to a mild epidemic, only one or two families developed a virulent type.

Typhoid Fever.

At Gogama on the C.N.R. there were some 15 cases of Typhoid Fever with five deaths during the summer months. The epidemic resulted from unsanitary camp conditions and was evidently spread by flies.

During the year other conditions not referred to above required an investigation owing to complaints or requests for assistance in control of Communicable Disease, or improving sanitary conditions.

Desbarats.
: Two visits in connection with Diphtheria epidemic.

Richard's Landing.
: Drainage and water supply.

Chapleau.
: Garbage collections and general unsanitary conditions.

Biscotasing.
: Suspect of smallpox.

Searchmont.
: Diphtheria outbreak.

Cloudslee.
: Diphtheria outbreak.

Spanish Station and Walford.
: Scarlet Fever epidemic.

Franz.
: Diphtheria epidemic.

Cockburn Island.
: Difficulty of securing medical attention owing to distance, and special difficulty of transportation during winter season.

Little Current.
: Water supply and pollution of same by drainage from cess pools.

Nestorville.
: Unsanitary conditions surrounding the plant of the Bishop Lumber Co.

Gordon Lake.
: Smallpox quarantine.

Provincial Laboratory.

The establishment of a Provincial Laboratory in Sault Ste. Marie has provided excellent service for this District. The physicians have repeatedly called attention to the improvement and convenience of the service. During the acute outbreak of Diphtheria, special benefits were evident in detecting carriers and providing information for the release from quarantine. In the country, as well as in the city, it was possible to have swabs taken from the pupils of a whole school or a whole class, and early reports obtained. By this means, carriers were detected and isolated, and it is possible to allow the schools to remain in operation, where otherwise it would probably have been necessary to close these schools in order to control the spread of the disease.

Maternal and Child Welfare Work.

I have been able to co-operate with the Public Health Nurses in Maternal and Child Welfare demonstrations in some twenty Municipalities where they have been working during the year.

This co-operation has been given by attending and assisting in the examination of school children and in clinics where local physicians were not available, and by attending Public meetings, and meeting the Municipal Councils of the Municipalities and talking to them on various phases of the work.

In only one Municipality was it possible to have a permanent nurse appointed as a result of these demonstrations. In the Town of Blind River where this appointment was made, the work has been successfully carried on. The nurse appointed has been able to carry her work into almost every home of the community where there are children, and in addition social and relief work has been accomplished under her direction.

Maternal and Child Welfare work is everywhere thoroughly appreciated, but the Municipalities have hesitated to assume the necessary expense required to support a full time nurse while Municipal financing is so difficult. The success of the demonstration work, however, has been quite apparent in the increased interest in welfare and the actual benefits derived from Public Clinics, Home Nursing Classes and actual bed-side nursing where such has been possible.

Maternal and Child Welfare service that has been carried on in unorganized Districts has also been very thoroughly appreciated in the more isolated settlements, and the benefits have been thoroughly demonstrated.

A permanent Government service for providing assistance and carrying on Health Education would be acceptable, and could in many cases relieve actual suffering and save lives as well as promote a general improvement in living conditions.

The main effort in Public Health has previously been placed in the control of contagious disease and in sanitary improvement. The branch of Maternal and Child Welfare is gaining recognition rapidly and is perhaps now the most active and the most successful effort being carried on.

There is, however, a link in the chain of Health activities which, in the rural sections particularly, is receiving less attention than it should be. Work in Public schools outside of the large centres, is not sufficiently active. The rural schools and school boards welcome and appreciate the service of demonstrating nurses, but there is no regular provision for follow-up work, and means are not available for providing or assisting in the correction of defects which are found at the time of examination.

This first year's work in District No. 8 has been most satisfactory from the stand-point of the District Officer. There has been no open or active opposition to any of the work attempted. Municipal Councils have welcomed each advance towards organization, and the physicians in the District have co-operated most heartily and have given their time freely in promoting welfare work throughout the community.

With the experience gained in the past year and the better knowledge of the conditions existing throughout the District it should be possible to have more evidence of satisfactory results for the year 1922.

Which report I beg to submit for your approval.

I have the honour to be,
Sir,

H. W. JOHNSTON,
District Officer of Health,
District No. 8.

North Bay, March 20th, 1922.

REPORT TO THE PROVINCIAL BOARD OF HEALTH OF ONTARIO,

From ALEX. R. WHITE, *Provincial Sanitary Inspector,* North Bay, Ontario.

Gentlemen:—

I have the honour to submit, for your consideration, my fifth Annual Report, covering the year 1921, as your Senior Inspector.

The year which has just closed has been without precedent in so far as your lay staff is concerned. From the year 1904, when the late George E. Young was appointed, the Board seems to have wrestled with the multitude of Health problems peculiar to the north country, with the assistance of this one Inspector, as the entire field force. The arguments of the Board, together with the claims of Northern Ontario for a larger staff of Inspectors, seem to have been endorsed by the Government, as we have the appointment of an additional Inspector in 1919, together with the three further appointments which took place during the summer of 1920. We have thus, at the time of writing, a staff of five Sanitary Inspectors and have divided Northern Ontario into five districts. These officials are located at the following places. Mr. Millar, at Fort William, Mr. Taylor at Sault Ste. Marie, Mr. McKee at Sudbury, Mr. Richardson at Cochrane, the fifth office being the original Headquarters, namely North Bay.

During the years of study which we have given Public Health work, two things have been vitally necessary if reasonable progress was to be expected. These have been, an increased staff of Inspectors in order that system could be applied and, secondly, to standardize our work in order that the same principles be put into force by each official, thus providing uniformity and consistency.

Both of these matters have now been provided. Our field is now well manned and our laws have been revised admitting and providing for reasonable standards, and as these have been operative for some nine months, it should be of very con-considerable interest to see how these new conditions have been viewed by the Public, and by Capital and Labour, and to note the gains made by an increased margin of safety and by the betterment of housing conditions. In order to show this clearly, I am consolidating the reports of our five Inspectors, but before so doing I wish to make a brief report on my own district, which comprises the Timber Agencies of North Bay, Parry Sound, Renfrew (or Arnprior), Peterboro, with part of New Liskeard, and to show as clearly as possible how my time has been spent.

Information given us by the various Timber Agents throughout my district gives a total of sixty-eight companies operating during the current season. These concerns operate 170 camps and employ 8,025 men. (It should be here noted that all statistics cover the lumbering season only which takes place during the winter. Our season is therefore partly in 1920 and 1921, beginning in September and ending in March or April, depending upon weather conditions.) All other matters dealt with cover the year 1921 only.

While the North Bay District is considerably larger than any of the others, embracing as it does five timber agencies, it is in reality the easiest to work and to supervise. It is the only district in which you have had a resident Inspector for a number of years, and is, and has been, known among lumbermen as the Head-quarters for Public Health work as relating to territory without municipal organi-zation. This being the case, it should be supposed the continuous propaganda

issued to operators in the surrounding district should have borne fruit. There is another reason, however, worthy of note. In speaking in terms of lumbering there are four distinct branches of this industry. These are:—*Concerns who cut pine lumber, companies who make railroad ties, pulp and paper companies* and *cord wood camps.*

The North Bay District is almost entirely made up of large companies who have large white and red pine holdings, many of whom employ five to six hundred men. These operations are carried on for the most part by company camps employing say an average of eighty men to each camp. The small jobber is present, of course, but not to any great extent. To supervise these large camps, then, is comparatively easy when we have ready access to a wealthy company, as opposed to requiring health reforms at the expense of the small sub-contractor who has had to borrow from the Banks for his very meagre equipment.

The Revised Regulations, which became law in May of 1921, did not reach us in book form until August, with the result that many of the corporations who strike appropriations early for the following winter's work made no provision for the altered conditions and indeed several lumbermen, who practice building camps twelve months ahead of requirements, had buildings constructed before our new standardization took effect. In spite of this, however, I have yet to find a camp constructed this year which does not to a very great extent conform to our new requirements. We have on record, two camps built to conform with our Class A, thirteen camps patterned after Plan B, and one after Class C. I do not wish to have it understood that these new camps are perfect to the last letter of the law, the difference, however, as compared with some of our old hovels, is wonderful and is apparent to both employer and employee.

Communicable Diseases.

I am pleased to be able to say that epidemics of communicable diseases in lumber camps are rare. We have, of course, sporadic outbreaks, but these rarely become alarming, proper co-operation and supervision by the contract Physician, your officials and the company management usually bringing the required result. During the year we have had:—

Smallpox at

J. R. Booth Company, Kiosk	8 cases
Hawkesbury Lumber Company, MacLaren's Bay	3 "
J. R. Booth's camp, Brule Lake	1 "
Spanish River P. & P. Co., Kenney Siding	1 "
Total	13 cases.

Typhoid Fever at

Spanish River P. & P. Company,	1 case
J. R. Booth, Brule Lake	1 "
J. B. Smith, Chudleigh	1 "
Total	3 cases.

Mumps at

Schroeder Mills & Timber Company, Pakesley	2 cases.

The number of camps visited and inspected by me during the season was sixty-one. I have, of course, covered the whole territory and have seen and dealt with every company and contract physician therein. My new duties, however, as supervisor of field work, prevent my performing as much routine work as during former years. This is a distinct advantage, however, as direction and office work are necessary if system is to be applied.

I see no reason for alarm in the future. I have made short trips with many of the contract physicians to the company camps and am very optimistic for the future.

Consolidation of Main Features

Showing Progress Made by Divisional Inspectors.

Lumbering statistics for the season 1921-22, as provided by Crown Timber Agents and covering the entire unorganized territories, show that we have operating 165 companies. These corporations, together with jobbers and sub-jobbers, have a total of 492 camps and employ 22,725 men. (These statistics cover winter cutting camps only.) We have in addition 100 saw mill camps which operate during the summer, as well as a considerable number of mines, but which have not yet been properly tabulated.

It may seem, after renewing our last year's budget of camps, which was 796, that there has been a falling off in this industry, and while this is true in the pulp and paper industry (notably in the Cochrane area) yet the discrepancy exists in practically four companies. Had the three northern paper mills operated as they previously did, the total number of camps would have been substantially the same as last year, which was our Banner Year. The depreciation in our total camps has not lessened our work by any means, for it may be noted we have actually 1000 more men in the woods this year as compared with 1920. This is explained by the large pine companies increasing camp crews, and by constructing larger camps, some of which employ as many as 145 men in one camp. We have therefore a camp budget very similar to that of last year.

New Camps Constructed.

In conformity with the Revised Regulations, delivered to us in August of last year, there have been constructed fifty-seven new camps, twelve in the Cochrane District, seventeen in the Sudbury agency, seven at Port Arthur, five near Sault Ste. Marie, and sixteen in the division of North Bay. It must not be supposed that in the districts of Sault Ste. Marie and Port Arthur, where the smallest number of new camps have been built, your officials have been negligent. Lumber companies have been quick to take advantage of Section Eighteen of our Regulations, giving them the privilege of using old camps already in existence until 1923, with the result that fewer new camps were built last season than at any time within my knowledge.

The group of Inspectors appear to be unanimous in the fact that our Revised Regulations now meet the situation entirely. Indeed, we have on file many letters from contract physicians who state in glowing terms the many advantages of our camp standards. The small sub-contractor is, of course, still the bugbear of lumbering as viewed from an hygienic standpoint. We are, however, correcting this small operator by bringing pressure to bear upon the limit-holder or licensee, who, if determined to log by the jobber method, may construct the necessary buildings and charge the cost back to the contracter, the total cost to be spread over the whole season.

Without question, the next two or three years will see Ontario's great winter industry upon a good sound basis. Our success during the past season has far exceeded my expectations. I can find no serious opposition among lumbermen to our camp standards, and while labour at times demands additions which may be viewed mostly as luxuries, still I find the great mass of employees reasonably well satisfied. Many camp foremen present the argument that in order to keep a clean camp some thought should be given to the personal cleanliness of the men when applying for work. This is good logic, for it must be admitted that an otherwise clean and well ordered camp can easily become infected with pediculi by the introduction of a man who cares nothing for personal cleanliness in himself and in others.

Communicable Diseases.

As stated elsewhere, we are fortunate in that we do not have serious epidemics of communicable diseases, at least in winter camps. This is easily explained when one considers that a camp is usually well isolated and even should there be one thousand men employed, the responsibility rests entirely upon the manager in charge and the contract physician jointly. We are not troubled with the breaking of quarantine laws since one of the first orders we issue is that no men shall be discharged or paid off, without the instructions of your officials. Few men, then, desire to break quarantine and leave behind say three months wages.

My experience inclines me to the belief that at least when smallpox is reported in a large camp, necessitating the vaccination of say one hundred contacts, the contract physician should be accompanied on his initial visit by the District Officer of Health or one of your Inspectors. Looking back over a period of five years, there have been few outbreaks which your Inspectors have not been compelled to finally take hold of and to supervise, but usually after the second and third cases had developed. I see no reason why cases of smallpox, with proper supervision and tact, cannot be confined to the original case. I may go further and say when more cases exist, after the physician has been advised of the first case, and has made his investigation, some one has blundered and the situation should be probed. I have given this matter considerable thought and believe I have discovered the reason for such failures. This I attribute to the failure to vaccinate all contacts. To vaccinate one hundred rough lumber-jacks is a task I find few men able to perform. The failure is not due to lack of knowledge, but rather to the physician's inability to convince through argument the necessity for such prevention. Then again, such a situation often times demands a much greater expenditure of time than the physician is willing to give. I feel, then, the contract physician should be accompanied on his initial trip by one of your legally constituted officers. The mere fact that the law is represented seems to have a most beneficial effect.

In the summer, in operating saw mill camps, our principal trouble is small outbreaks of Typhoid and Dysentery, such as we had at Gogama last summer. We, of course, deal with all buildings owned and controlled by the employer of labour. We would like, however, to have our sphere of usefulness extended to embrace these small towns also. I am often questioned as to our apparent neglect of these mushroom towns, close to the railways, when we are so particular in isolated camps possibly thirty miles from the steel. Generally speaking, such towns and villages are in a most unsanitary and dangerous condition.

The total case record for the year 1921 is as follows: —

Smallpox	20 cases,	1 death.
Typhoid fever	7 "	
Scarlet fever	1 "	
Mumps	2 "	
Total	30 cases	1 death.

THE CONTRACT PHYSICIAN.

The contract physician and his connection with the employer of labour and with our Regulations is at the moment of writing the weakest link in the whole chain. I do not mean to infer that it is a case of wilful neglect, but am more inclined to the opinion that this official has not yet come to realize the position which he holds with respect to these companies is as a preventative agent first, and as a curative agent afterwards. Our biggest job now seems to be to instil this thought into the minds of all physicians engaging in such work. We have ample proof of this contention. In a number of instances where we have young doctors specializing in contract work and studying prevention, the camps are much superior to those attended by a city practitioner, who takes up this work as a side issue only and makes few visits to the actual scene of operation. Indeed the few visits this class of physician makes are usually so hurried as to be of little value. I hope the day is not far distant when work such as this will be entirely in the hands of younger, hardy men, who will specialize and who will see the importance of spending the night at each camp employing fifty men or over and who will supply our Board with a monthly report of some value.

The monthly report required by our laws is, save in but few instances, a very poor rendering of such a stewardship. This must be changed now that we have provided a reasonable fee for supervision. I am strongly in favor of suspending physicians who do not report intelligently monthly, or visit the camps as often as required. The industry is much better off without them, to retain them invites disaster.

To sum up the inspections made during the year, I find from divisional inspectors' reports and from my records that 422 camps have been examined, 50 small towns and villages have been inspected, together with many visits made in company with the District Officers to some of the larger towns and cities. Another year should see all camps and saw mills once visited at least. Considerable time was lost in the making of actual inspections during the early part of the winter by reason of propaganda work respecting the Revised Regulations, which cannot be termed time lost.

In conclusion, let me say respecting the field work of our division that the utmost co-operation is shown by the group of Inspectors. The District Officers also are of great assistance to us and are always available for a general discussion and to lend a helping hand. The definition of the Inspectors' duties has done much towards fixing responsibility and is a very decided advantage. I believe your Inspectors have every reason to congratulate themselves upon this first year's work as a responsible group. We are very grateful for the recognition and support accorded us by the Board and for the assistance given us by our director Dr. R. W. Bell. We also wish to thank our chief, Dr. McCullough, for the very liberal support he has always given us and who has made possible the writing of such a report.

Respectfully submitted,

ALEX. R. WHITE,

Senior Provincial Sanitary Inspector.

Sudbury, Ont., March 1st, 1922.

Annual Report from District No. 6.

North Bay, March 15th, 1922

From John Richardson, Provincial Sanitary Inspector,

To The Provincial Board of Health of Ontario.

Gentlemen:—

I beg to submit herewith, for your consideration, my Annual Report for the year ending December 31st, 1921.

Joining the staff of Inspectors on the 15th of July, 1920, a short time was spent in the North Bay office with a view to obtaining the rudiments of the work to be carried out. In the latter part of August, accompanied by Dr. Cunningham, Director of the Bureau of Industrial Hygiene, Mr. White and I made a tour of the North Country, visiting such places as Cobalt, Iroquois Falls and Kapuskasing, from which point the Doctor returned to Toronto. Mr. White and myself continued our journey west, visiting Minaki, where we inspected the numerous summer resorts on the Winnipeg River, the camps of Simpson & Short located on Pistol Lake. From here we proceeded to Kenora, Fort William and Port Arthur, returning to North Bay by way of Sault Ste. Marie and Sudbury. The object of our visit was mainly an introduction to the country and to meet the heads of the various lumbering concerns and the contracting physicians.

I also accompanied Mr. Taylor on a tour of inspection of lumber camps in the District of Parry Sound and along the main line of the T. & N. O. Railway.

On or about September, 1921, the Board decided to place Inspectors in various portions of the Province. With this arrangement coming into force, it was decided that I should have the supervision of the South Porcupine and Cochrane timber agencies.

Lumbering Statistics.

From the reports of the Crown Timber Agents of South Porcupine and Cochrane the number of companies operating in these sections during the lumbering season, commencing in August and ending in March of each year, gave a return of ten companies with forty-three camps, giving employment to 3,000 men. During the year's work I have made 120 camp inspections.

In regard to the Abitibi Power & Paper Company's woods operations, I was unable to make an inspection of their camps owing to legal proceedings and an agreement between the Provincial Board of Health and the Company, whereby it was agreed that an inspection of their operations would not be made before January 1st, 1921. Owing to the favourable conditions in the Fall and the exceptionally mild winter, all Company and jobber camps closed down on December 28th, 1920. In view of these circumstances an inspection of this Company's woods operations would have been of little or no value, as no action could have been taken.

Re Mattagami Pulp & Paper Company, Smooth Rock Falls.

My inspection of this Company's woods operations showed a little improvement in company camp buildings. The great fault found was a strong tendency to overcrowding in some instances. To a large extent this condition was rectified on my interviewing the management in this respect. The jobber camps showed little or no improvement, the majority being of the usual shack and hovel type so prevalent in recent years.

Re Mining Companies.—During the year I have made numerous inspections of mining camps located in the Porcupine, Kirkland Lake and the Larder Lake Mining Divisions, this being the first time that any of your Inspectors has entered upon this phase of the work. Speaking generally, I find that these camps are of a higher grade than the majority of lumber camps, more attention is paid to the cleanliness of buildings and to the outside conditions in regard to sanitation.

Summer Camps, Saw-mills and Rossin plants. Owing to the limited market for lumber and a great reduction in the price of pulp wood, only a small number of plants of the above description were in operation. A number of plants were burnt down by the forest fires during the summer. Of ten inspections made, I found that sanitary conditions were not well maintained, averaging thirty men to each plant. These, along with their families, make up a small community. These small villages are often a source of danger, occasional outbreaks of Typhoid fever and Dysentery causing us considerable trouble.

During the year a sweeping revisal of the Regulations was approved of and a much needed reform was introduced, standard plans for bush camps being one of the main features and will, in my opinion, in the course of time, eliminate a great great source of our trouble. With the issuing of these new Regulations, a great deal of propaganda work became necessary, which entailed a great amount of time and travelling to interview the various lumber companies and contract physicians. The time occupied and the valuable work carried out by your Inspectors in this connection, will, I believe, be fully realized during the coming seasons. This has already been verified to some extent this season, as a number of lumber companies have erected camp buildings from the plans supplied in conjunction with the Regulations. Plan B. appears to be the one mostly favoured by the larger operators. The number of camps built according to plans provided was Plan B—9, Plan C—2, Combination Plan—1.

Re Messrs. Morrow & Beatty, Contractors. This Company was engaged throughout the years 1920-21 erecting a dam at Twin Falls, on the Abitibi River seven miles above the town of Iroquois Falls, for additional power to the Abitibi Power & Paper Company's plant at that place. I wish to make a few brief remarks on the sanitary arrangements and cost of same carried out by this firm. The construction camp consisted of twenty-one sleep camps, six cookeries and about forty private houses. Water for domestic purposes was drawn from the Abitibi River. A chlorine apparatus was installed and an average of forty-five thousand gallons of water were treated daily. The garbage was collected daily and disposed of by burning, an incinerator being used for this purpose. The latrines were built of lumber and were fitted with removable boxes, contents and boxes being buried in trenches and the latrines supplied with new boxes. A steam sterilizer was installed capable of sterilizing twenty-five pairs of blankets daily. Ice was supplied by an artificial ice plant, with a daily capacity of two tons. The amount expended on sanitation for the period mentioned amounted to $12,-205.00. Mr. Beatty, who was in charge of the construction work, was at all times willing to discuss the question of sanitation and act on any advice offered. The camp was entirely free from any contagious or infectious disease.

I have also visited the following places:—

Iroquois Falls	2	visits.
Low Bush	1	"
Timmins	2	"
Smooth Rock Falls	3	"
Wye	3	"
Kapuskasing	3	"
Twin Falls	2	"
Total	**16**	**visits.**

In connection with communicable diseases I have visited Kenabeek, Osseo, Frederick, Porquois Jct., Matheson, Sturgeon Falls (small pox), Smooth Rock Falls, Kapuskasing (typhoid fever), Latchford (diphtheria). I have also investigated three complaints and settled two disputes.

In the Fall of the year, the contract for the extension of the T. & N. O. Railway, sixty-eight miles north of Cochrane, was let and the tender of Messrs. Grant, Smith & McDonnell of Vancouver and Calgary was accepted by the Commission. This work immediately drew to my attention that a possible source of danger would exist, owing to the fact that the waters of the Abitibi River are being grossly polluted by sewage from the towns of Matheson, Iroquois Falls and the adjacent village of Wye. Meeting the representatives of the company and their physician, Dr. Pettman, at Cochrane, I fully explained the Regulations and the Board's requirements, and also pointed out to them the probable danger from using water from the Abitibi River for domestic purposes. This they fully realized.

Re Physicians' Reports and Contracts. As requested by the Regulations, these must be forwarded direct by the companies and physicians to our Head Office in Toronto. I often think that this is a mistake, as a much better result would be obtained if each Inspector were allowed to receive these papers in the first instance. All information and data could then be noted. This would enable the Inspector to keep a close check on all companies and physicians who had not fulfilled the requirements of the Regulations. This method would also save considerable expense and time, as I find from my own experience that the Inspector has eventually to make special trips to obtain these documents.

In conclusion I wish to express my sincere thanks to my fellow Inspectors for their co-operation and unfailing support.

Respectfully submitted,

To Provincial Board of Health, Ontario,

From D. S. McKee, Provincial Sanitary Inspector.

I have the honour to submit herewith my first annual report as Sanitary Inspector in your Department. This is covering from 1st July, 1920, up to and for the year ending December 31st, 1921.

In taking over the office as one of your sanitary inspectors, occasioned by the increasing of your staff on July 1st, 1920, working out of the North Bay Office for the first four (4) months, familiarizing myself with the nature of the work in the field, and the usual office routine work, at your instruction proceeding to Fort William, District No. 7, working out of your office there during the lumbering seasons of 1920 and 1921, up to May 1st, 1921, on which date Mr. W. C. Millar took over the Fort William District, and I returned to North Bay, working out of that office until such time as you appointed me to take over your new office in Sudbury District on September 1st, 1921; Sudbury being an important railroad centre, coupled with being the headquarters and centre for the lumbering and mining camps has an advantage for headquarters for a Sanitary Inspector, and a broad field for sanitary work is open in this District.

No. of Camps and other inspections made: During the first eighteen months with your Department I have inspected 152 camps. This is including lumber, mining, and construction camps. Some of these inspected by me were located as far as 31 miles from a railroad which entailed a very long walk or drive through the bush. Coupled with camp work I was compelled to visit 27 small towns and communities in connection with the sanitary conditions and communicable diseases, etc. In most of these small towns or communities the nature of the work demanded a return visit to be made two or three times before the acquired result could be completed.

Mileage travelled: Covering from July 1st, 1920, up to December 31st, 1921, I travelled 23,336 miles in the course of visiting camps and towns, etc. This was almost entirely in Districts Nos. 6 and 7.

Camp Regulations: Your new camp regulations which came into force during 1921, and enforced this season for the first time, are highly approved of by most of the lumber companies in my district, and I feel assured you will have their co-operation in the construction of all new camps along the line of either one of the plans shown therein, outside of camps constructed before our new regulations came into force. All new camps this season were constructed along the lines of your specifications, seventeen new camps in all, with the exception of Mr. J. Carrier's camp at Gogama, who compelled me to take police court action and he was fined $25.00 and costs on each of the two charges. All other new camps were constructed according to your regulations. These new camps are highly appreciated by Lumber companies, and especially employees, who appreciate this higher standard of living conditions in comparison to the unsanitary living conditions in past years, and I feel assured with close supervision and propaganda in this unorganized territory, and continual missionary work in these small towns, mill camps, and bush camps in the course of one or two seasons, the living conditions around these saw-mill camps and lumber camps will be greatly improved, and brought up to near the same standard as their brother workers in the city factories.

Re Contracting Physicians: With reference to the contracting physicians' monthly reports of visits to these camps. I have discussed the matter with each one of the doctors concerned in my District, and I find in each case that it *is not* altogether through neglect a useful monthly report is not forwarded to your Department, but for lack of knowledge of what information is required in this monthly report, and I feel sure if we could have a printed form, both for a medical agreement and monthly reports, this could be filled in on each visit to a Company's camp, and in this way could have more detailed and useful information in your Department.

If you could allow these monthly reports to come through District Sanitary Inspector's Office, much useful information could be gleaned, and more direct action taken where necessary by your Inspector on the field, as it is practically impossible for the Inspector to visit each camp in his District during the lumbering season. Having on hand a record of the physician's report on the sanitary condition and other information, any conditions contrary to the law could be investigated and action taken immediately to have same rectified, thus saving time and delay with the matter. The medical attention given to employees in the camps by the contracting physician this season seems to be much improved and much keener competition between the physicians for this camp work, which eventually will mean better medical service, since our physicians will receive a renumeration from the companies for this work, along with the medical fee from the men monthly.

Inspections of Small Towns and Communities: Since I have been your inspector, I have visited and inspected twenty-seven different small towns and communities, most of these being unorganized and having no Board of Health. I feel sure it will take a considerable amount of propaganda and missionary work to bring the sanitary condition of these small communities up to what we are hoping to achieve in the lumber camps. I feel sure though, if pamphlets and circulars could be distributed freely, and a close sanitary inspection occasionally made, the risks from typhoid and dysentery epidemics would be limited. The importance of excluding bowel and bladder discharges from flies and other sources of infection is not realized by most of the inhabitants in these small communities. As recently as last Fall at Gogama, where one man came in from another town, and developed typhoid, in a very short time after we had two (2) deaths and eighteen (18) cases, developed apparently through the unsanitary conditions and fly contact, which is a very common menace to health in these small communities. I regret having to report in most of these small towns and communities, I find from time to time the sanitary conditions are far below some of our bush camps, which are located as far as 30 miles from a railroad and a considerable amount of time and missionary work will have to be carried out before they come up to the same standard as some of our new camps.

In concluding I would like to point out I firmly believe by having a form printed for all camp contracting physicians, both in the form of a medical contract, and a form for monthly reports, this would give you uniformity and standardize the information you most require and be beneficial to your Department. I have had several monthly reports forwarded to this office from the contracting physicians, with little or no information, other than they had visited Mr. Jones' camps, and perhaps a report of this type, covering two or three companies' camps, and on the same sheet of paper. In each case I returned these reports, advising the physician what information is required, also advising that this report must be forwarded to the Secretary of the Provincial Board, Toronto. If

these medical agreements and monthly reports, along with the information stated on Section 1 of the Regulations, be furnished by the companies, if this correspondence could be received by each District Sanitary Inspector for record purposes only, and a file kept, the correspondence could then be passed on immediately to your Head Office, Toronto. This would keep each inspector closely in touch with all operations, etc. in this district, and all corespondence in connection with same up-to-date.

All of which is respectfully submitted,

DAVID MCKEE,
Provincial Sanitary Inspector.

ANNUAL REPORT, DISTRICT No. 7.

Fort William, March 7th, 1922.

DR. J. W. S. MCCULLOUGH,

Chief Officer of Health for Ontario, Toronto.

Sir.—I have the honour to submit to you my first annual report as your inspector for No. 7 District. I took over the charge of this district on April 1st, 1921, from our Mr. McKee, after having spent five months in the North Bay Office, where I had the opportunity to assist in the stamping out of the smallpox epidemic which raged in Sturgeon Falls in November and December, 1920. This experience, with more along the same line which I had while in North Bay, will be of inestimable value to me, should I be called upon to assist in the same capacity here.

Lumber Camps. Owing to market conditions for lumber and pulp, only about 40% of the usual number of camps are operating this year. There are, in all, about forty companies, having between them around seventy camps. All these camps, with the exception of seven are of the old type and are far from being what the regulations call for, but as, in most cases, they are on their last season in the limits where they are built, I let them be used after necessary improvements were made. The seven new camps referred to were built this year, one of them being built on Class A. plan, and the other six on Class B. plan. (This new style of plan has been very favourably commented upon by lumbermen and their workers.) Two thousand men were engaged in those seventy camps from October, 1921 to March 1922.

Summer Camps. There were eighteen summer mill camps operating in this district during the past season. In most cases these mill camps were in a better sanitary condition than the winter lumber camps. There were eleven hundred men employed in them for five months of 1921.

Government Road Camps. There were five Government road camps operating in this district in the past year, working under the Department of Lands and Forests. These camps were of the poorest type, owing to the inferior material supplied by the Department for their construction. I would strongly recommend that the plan for summer camps, as shown in the new regulations, be strictly enforced in all Provincial Government summer camps, as it is very hard to make a lumberman's foreman understand why he should comply with certain regulations thirty miles in from a railway, after he has spent a summer working in one of the Provincial Government camps in the settled districts, where the regulations were not enforced. There were about one hundred and fifty men engaged in the above camps for five months of 1921.

Hydro-Electric Camp, Hydro (Nipigon). The Hydro Commission had a camp with about six hundred men at Hydro. This camp was built after the Army plan, and was a very good one.

Summer Resorts. There are five summer resorts in this district, patronized by about two thousand people. I made certain recommendations during my visits to these and particularly where extra hazards were apparent in connection with the public water supply, and had considerable satisfaction in seeing my advice being carried out.

Conclusion. During the year several conclusions have been forced upon me, some of which I would like to discuss briefly. The Government Road Camps, reported upon by me several times and mentioned elsewhere in this report, are still far from perfect and while apparently the local superintendent is anxious to please your officials, I feel he has not been given sufficient authority from Headquarters. I would like to insist that these camps be brought up to the same high standard as we have planned for our logging camps.

I also feel that a weekly bulletin of all contracts, reports, etc., as effecting each district, should be sent to each inspector from headquarters. We would then be in a position to deal with delinquents, whether company or physician. To do this it may be necessary to increase your office staff but, even so, system demands that this bulletin be issued during the logging season.

I believe also, if a stock contract, together with a printed physician's report form, were to be supplied, much good would result.

The fixing of responsibility for all camp life upon the Inspector is proving a wise arrangement and is decidedly popular with the employers of labour.

I firmly believe no further contracts should be accepted with physicians whose previous records show indifference and lack of sympathy with our laws and who do not make the necessary monthly reports.

I also believe that the Sanitary Inspector should be given an opportunity to try examinations, leading to the granting of a diploma. Some qualification is necessary, at least for your inspectorate who are looked upon as authorities by local officials. Then again, the fact that we have such qualification would be most convincing during a court procedure.

Inspections Made. During the year I have made one hundred and five sanitary inspections and have travelled roughly eleven thousand miles. I also accompanied Dr. Sparks, D.O.H., on an inspection tour of the towns lying west of Fort William on the Canadian National Railways. I may also say that the District Officer has been of the greatest assistance to me in my work in the District.

Respectfully submitted,

W. C. Millar,

Provincial Sanitary Inspector,

Room 4, City Hall,

Fort William, Ontario.

ANNUAL REPORT, DISTRICT No. 8.

Sault Ste. Marie, Ont. March 13, 1922.

To the Provincial Board of Health, Ontario.

Gentlemen:—

I have the honour to submit the report of the Sanitary Inspection of Lumber camps and unorganized territory for District Number 8.

The year has been given mostly to propaganda and education, as I found on making my visits into the Lumber camps, and unorganized districts, that I was the first official to cover the ground; consequently, regulations and the Health Act, were entirely new to most of the people I met.

Visiting the Lumber camps, I found various propositions; some had contracts with Physicians, but no visits were made to the camp by the Physician; all cases of sickness, if serious, were sent to the hospital or otherwise treated by the foreman or clerk, if any medicine happened to be on hand. In many cases the men purchased patent medicines from the Van, although paying medical fees. It is a pleasure to see a decided improvement along these lines; the Physicians now realize that they must make their monthly trips into the camp, and report regularly as required by regulation No. 2. The men also refuse to purchase cough syrups, liniments, etc. from the Van as previously, and I find the supplies of such necessities much improved, and feel sure now the Companies and Physicians are being more closely in touch with the Department we can look forward to great improvements in the operating of Lumber camps and the care of the employees.

One of the most serious propositions I found, and I feel sure the other Inspectors must have had the same difficulty, were the Jobbers. To think of men and young girls living in one building without any privacy was a very strong point with me: in all cases I found thus, I ordered the women's part to be closely screened, and separated from the men. Now that I have covered the ground thoroughly and talked with the Shackers, there is no reason for any such buildings to exist after this season. Our combination plan meets this situation fully and I expect before next Fall this plan of camp will be in general use throughout the District.

The Company camps also require to be altered and additional buildings erected to comply with the regulations. In nearly all cases bunk houses were over crowded, and badly lighted and ventilated, but I find upon interviewing the Officials responsible for the camps, a readiness to comply with the regulations.

Hospitals. This question has been one in which the employees have not had fair treatment. During the past season I have had three cases to handle where the men had been charged Hospital expenses, one case of $35.00, one $10.00 and one $60.00. Evidently it has been a regular practice to collect from the men if at all possible.

Then again, very few camps had any buildings or accommodation to cope with an outbreak of a communicable disease. They are now having some buildings ready to be cleared for use in such cases of emergency.

The new form of contracts we are having signed covers the question more fully and places the responsibility of Hospitals with the Companies.

There is only one way for our Department to improve conditions in the Lumber camps: that is personal visits of the Inspectors into all camps and Shackers engaged in the woods and mines operations. Already I see rivalry amongst

Shackers as to who has the best kept camp. Once we create this spirit amongst the Shackers, cooks and chore boys we will soon improve the sanitary conditions, and the construction of buildings is very easily handled with the Companies.

During the season 1920-21 I had over 200 camps with over 7,000 men. 1921-22 I estimate about 140 camps with nearly 5,000 men employed.

Some of the largest Lumber Companies we have are:

The Searchmont Lumber Co., with four camps. (Closed.)

Bishop Lumber Co., foru camps on the A.C.R. and one in Otto Twp.

Graves & Bigwood with three camps, which did not operate 1921-22.

The Lake Superior Pulp & Paper Co. reduced their cut of pulp wood from 175,000 cords in 1920-21 to 100,000 cords in the season 1921-22. However, the reduction in operations has enabled me to visit the camps and have a personal knowledge of the operations in this District, so that any existing camps that do not at present conform with the regulations may be altered and all new ones built as per required plans before opening another season.

A very serious outbreak of Small Pox was brought to my notice the last week of December 1920, in the Townships of Rose, Plummer, Galbrath, and Aberdeen. This had been running its course for over two months, consequently on making my first tour of inspection there were fifty cases. During January, twenty-five other cases developed. All these with the exception of two were in already infected houses. A thorough inspection of the Townships infected was made and all cases were strictly quarantined with provision made for their requirements. All contacts together with school children, and any residents who wished, were vaccinated with the result that by the end of February the whole epidemic was cleaned up, with only one death.

It was necessary to make many visits and impress upon the people the importance of vaccination as a preventative against the disease. This was brought home to all by the case in Dunn's Valley school where the only child who did not contract the disease was a boy who had emigrated into this country and had previously been vaccinated.

During the summer I made two visits to Manitoulin Island especially to inspect the Fishing Stations and Summer resorts. We need yet to educate the Hotel and boarding house keepers on the importance of sewerage and garbage disposal. Often we find a sewer pipe direct from the building to the nearest stream or lake with a pump for the water supply within a hundred yards. This is a very important item, as many go from the Towns and Cities for the benefit of their health and after returning home develop Typhoid Fever.

Garbage disposal is also very bad, being usually heaped up behind the building and sometimes removed at the end of the season, or lies all Winter until a general clean-up in the Spring takes place, in preparation for the re-opening.

Again, only by personal visits and talks with the proprietors as to the importance of pure water and the elimination of the fly nuisance, can it be expected that Summer visitors may come with safety to their health.

The wayside hotels and boarding houses are a question only just touched upon, and I hope during the coming Summer to give more time to inspection of those premises. Some are very careless regarding the cleaning of beds and rooms, consequently, bed-bugs are carried through the camps by men stopping at those places. So far as I can see, they should, in most cases, be treated as a camp, being used in many cases by the men going to and from the woods.

Dairies. In company with the District Medical Officer, Dr. Johnston, I made several trips around the farms supplying milk to the Cities and Towns. We found very few equipped for the handling of milk; cow-barns are mostly the old type: low ceilings with open floor from the hay-loft above, causing at times a considerable amount of dust. Cows are not thoroughly cleaned, or properly stalled: then again no separate milk house or cooler are provided, consequently the milk is often sour, or partly so before reaching the retailer. We are hoping to see much improvement in the future, as I hear of several farmers making inquiries for equipment.

I gave special attention to the milk supply for Espanola and after having this in hand for some time, this year has seen some results. A central distributing dairy was erected in the Town with all the equipment necessary, excepting the pasteurizer, which I hope to see installed shortly and, instead of peddling the milk in the large cans and measuring out with a dipper, we shall have a regular supply all bottled. The latest tests taken at our branch Laboratory at the Sault show a clean and good milk with a high per cent. of butter fat.

In concluding this review of my work, I must say any results I may have attained have been made possible by the full co-operation of the District Medical Officer, Dr. Johnston, who has at all times been ready to assist me in every way possible. Such co-operation amongst the various officers, in their respective Districts, is the only solution to making Ontario the model Province of the Dominion.

All of which I respectfully submit,

James Taylor,
Provincial Sanitary Inspector.

ALLISTON.

His Worship, The Mayor, and Members of the Council of the Town of Alliston.

I hereby beg to submit the annual report of the Board of Health and the Medical Officer of Health for the year 1921.

As you are aware, it has been necessary during the year, to make another appointment of Medical Officer of Health, owing to the death of the former occupant of the office, Dr. J. J. Harper.

I wish briefly to add my tribute to the able and efficient manner in which he conducted the duties of that office, and the great interest which he always exhibited in the general health and sanitary conditions of the town.

During the year 1921, the general condition of the town, so far as communicable diseases are concerned, has been very satisfactory. There have been no epidemics, and, in all, there have been reported 4 cases of smallpox, 1 case of scarlet fever, with a few cases of chickenpox. The cases of smallpox were of a very mild type, and prompt quarantine measures prevented a spread of this disease. This was also helped by the fact that vaccination has been in practice to a very great degree in Alliston, and in no case was the disease contracted by any one who had formerly been vaccinated. This fact alone is a very strong argument in favor of vaccination.

In May, at the request of the Home and School Association the Local Board of Health asked the Provincial Board of Health, to give a public demonstration on Child Welfare. This was given in June 8th, when a Child Welfare clinic was held at the town-hall, presided over by a medical man from Toronto, an expert on infant feeding, assisted by the local medical men. There was also assisting, Miss Vrooman, a Public Health nurse, supplied by the Provincial Board of Health. At this clinic about 30 babies and young children were examined, and the mothers advised as to feeding and treatment. Three other clinics were held by the local medical men, assisted by the nurse, and these clinics were much appreciated by the mothers of the town.

In June, a general medical inspection of the pupils of the Public School was held during several days. This was accomplished through the hearty co-operation of the local medical men, assisted by the nurse, and through the goodwill of the teachers and parents. This examination was very thorough, and much good resulted, as in many instances defects were discovered, which had never been suspected by the parents. This duty was performed by the medical men voluntarily, and at some considerable trouble and loss of time to themselves. As it is for the general good of the community, I would respectfully recommend that they be recompensed in some measure for their trouble, as has been done in former times.

On April 25th, a meeting was called to consider what action should be taken in regard to septic tanks in the town. A motion was passed, asking the Town Council to adopt the Statutory By-law, Schedule "B" Section 115, with such amendments as would be required to suit local conditions. This was afterwards adopted by your Council. An application was made to the Provincial Board of Health, asking them to supply an inspector to inspect the septic tanks and the

sanitary conditions in the town, and report to the local Board as to its efficiency. The inspector was sent and after examination reported conditions to be quite satisfactory.

At the present time, a written application must be made to the local Board of Health for permission to construct or to change the construction of septic tanks, accompanied by a full description of the same.

The Board of Health endeavored to draw to the particular attention of the public, the necessity of observing Clauses 2 and 6 By-law 367, amendment to Schedule "B" of the Public Health Act, relating to disposal of sewage and night soil, and insists on the co-operation of the public in carrying out the provisions of this By-law. In conclusion I would state that the public health and sanitary conditions of the town of Alliston are in as good or perhaps a better state than any town in the Province of Ontario.

Respectfully submitted,

J. D. CUNNINGHAM, *M.O.H.*

BARRIE.

BARRIE, Nov. 15th, 1921.

To the Chairman and Members of the Board of Health, Barrie, Ont.

Gentlemen:—

I herewith submit to you my report re sanitary conditions of the Municipality during the year 1921, ending Nov. 15th.

Births	175
Marriages	76
Deaths	112

INFECTIOUS DISEASES REPORTED.

Scarlet Fever	19	Typhoid Fever	5
Diphtheria	24	Tuberculosis	6
Smallpox	1	Measles	4

DEATHS FROM INFECTIOUS DISEASES.

Scarlet Fever	1
Tuberculosis	5

DEATHS OF CHILDREN UNDER ONE YEAR.

Causes:	Premature births	5
	Malnutrition	2
	Difficult birth	2
	Marasmus	1
	Cholera Infantum	1
	Infectious Diarrhœa	2

Upon request of the Women's Institute the Provincial Board of Health sent us Miss Healy, one of their Public Health nurses, to promote maternal and child welfare work. So well was this work received that a Community Nursing Association was formed to give their aid and later funds were raised by them to finance for a successor to Miss Healy. Miss Nodwell, being appointed, has been carrying on the work outlined in a satisfactory manner; also giving special attention to the care of our tubercular patients.

INSPECTION OF SLAUGHTER HOUSES.

These were found in the Spring months to be in an unsanitary condition. Sanitary Inspector F. Smith, by repeated visits and warnings was able to improve matters and bring about a more satisfactory condition.

DAIRIES.

By the courtesy of Dr. Hastings, Medical Officer of Health, Toronto, our Sanitary Inspector was able to study his methods of Pasteurization, Milk Inspection, Sedimentation, test for dirt, testing for butter fat, and in consequence he has been able to do his work in a more efficient manner. During the early summer months milk was delivered to the dairies at a very high temperature, no effort apparently being made to cool same. In consequence the milk quickly soured and had a bad odour. Notification was given to the offending producers and conditions improved forthwith.

The standard of our milk has been raised as regards the increased percentage of butter fat in samples submitted, and in its cleanliness.

The Town's Water Supply.

The Town water is absolutely free from contamination of any kind, but all are not privileged to use same. Many wells still exist which may be a menace to health. If by laboratory tests they are found to be contaminated, orders are given for their cleansing or filling up.

Septic Tanks, Cesspools.

Two permits were given for installation of septic tanks where sewer connection could not be had and where the soil was suitable for their proper working. Your Board does not issue permits for the construction of Cesspools and favor the closing of existing ones.

Dumping Ground for Refuse.

Weekly inspections of town dumps were made. An incinerator at a small cost was established and is performing the work satisfactorily.

The usual inspections of restaurants, grocery stores, hotels, fruit stores, livery stables, laundries, have been made and reported on from time to time.

Three prosecutions were made under the Health Act during the year.

I must report that I have found the Sanitary Inspector to be faithful and energetic in the discharge of his duties.

I have to thank the Chairman, Secretary and members of the Board for the hearty co-operation in Board of Health work.

In conclusion I would like to make the following recommendations for future consideration:

1. The scientific pasteurization by one plant of all milk sold in the Municipality.
2. Weekly collection of garbage, kitchen waste, ashes etc., as a Municipal service.
3. All restaurants, hotels etc. to have an outfit for sterilization of all dishes and utensils used in the preparation or serving of food, to afford protection against spread of communicable diseases.
4. The permanent employment of a Community Nurse by the Municipality to assist in Board of Health work, maternity, child welfare, social service or other community nursing.
5. A more cleanly delivery of bread, cakes, either by wrapping them, or the wearing of clean gloves by the carrier.

All of which is respectfully submitted,

A. T. Little,

Medical Officer of Health.

Barrie.

BLIND RIVER.

To the Mayor and Alderman, Blind River, Ontario.

GENTLEMEN:—

I have again the honour of submitting the annual Medical Health Report of our town as follows:—

Infectious diseases: No cases of smallpox, scarlet fever, measles or meningitis came under my notice. There were 2 cases of diphtheria—one last January and one at present isolated in the Hospital, which came from one of the camps north of here. This last case was secured early and cured in 24 hours. The first case had run for five or six days and the case eventually proved fatal, due to paralysis of the heart. During the month of November there were several cases of chicken pox, with no bad results. No cases of typhoid fever during the past year.

Statistics—Births—There were 67 births, 27 male and 40 female. Of the 67, five were cases where the parents were non-residents.

Marriages—Several marriages were recorded here, many being complete outsiders. In 6 of the marriages both contracting parties belonged to the town, and in two instances one party belonged to the town.

Deaths—There were 18 deaths, 9 male and 9 female, in the municipality, eleven less than the year 1920. Of this number 4 were premature births or still-born babies. Two died of infant troubles, two were drowned, five died of pneumonia, three of heart failure, one of indigestion and one of paralysis of the heart. There were no deaths from infectious diseases.

During the year several complaints of unsanitary conditions were dealt with. Too many people in Blind River still think the public highway is the proper place to throw rubbish and other kitchen refuse.

During the months of May and June I examined all the school children in both schools, with the assistance of Miss Grenville, the Provincial Nurse. Our attention was directed more particularly to the condition of the teeth and throat as well as to personal hygiene, and a report made to the parents. I might add that Miss Grenville spent two months in Blind River visiting the homes, schools and establishing baby clinics. At present we have with us Miss Fortier, who is carrying on similar work. She has visited many homes giving instructions along nursing lines, and is carrying on a Baby Clinic every week with great success. A great deal of enthusiasm has been aroused among the mothers of young babies. Miss Fortier is doing her duties well, but it must be remembered that her principal duty is instructing rather than carrying on active nursing.

I wish to commend very heartily the co-operation of our health officer, Mr. Labbie, who is always willing to assist in preventing unsanitary conditions.

In conclusion I wish to thank the other members of the Board in the person of His Worship The Mayor and our Chairman, Mr. Dyke, for their co-operation during the year.

JOHN M. ROBB.

BRANTFORD

To the Chairman and Members of the Brantford Board of Health.

LADIES AND GENTLEMEN:—

In accordance with Public Health Act, I beg to submit my Annual Report for the year ending October 31st, 1921, upon the sanitary and health conditions of the City of Brantford.

I am glad to report a birth rate of twenty-five per thousand and a death rate of ten per thousand, the lowest in the history of the City.

INFANT MORTALITY.

You will remember that during the year ending October 31st, 1920, we had the lowest infant mortality rate in the history of the City of Brantford—ninety deaths per thousand babies born. That was a tremendous drop from the rate for the year 1918, when one hundred and twenty-eight babies out of every one thousand, died.

For the year ended, we are glad to be able to record a new low record infant mortality rate. Sixty-four deaths per thousand babies born.

The latest available figures for the whole Province of Ontario show that in the year 1920, 72,511 babies were born, 7,802 died before reaching their first birthday, which gives us an infant mortality rate of 107. If the whole Province had the low infant mortality rate which Brantford has, only 4,697 babies would have died, and there would have been a saving of 3,105 infant lives.

The causes of this astonishing reduction in our infant mortality are, I believe, as follows:

1. The fact that Brantford now has a milk supply which for safety and purity cannot be excelled on the Continent. Eighty per cent. of our milk is pasteurized, twenty per cent. comes from cattle which are in process of being tested for tuberculosis, and the whole milk supply has attained a remarkable standard of purity. I firmly believe that in the past, infants have been poisoned wholesale by impure milk. Dr. Cutcliffe's report will show the control which the Health Department maintains over our milk supply.

2. The work of the Social Service Baby Clinic, and the bed-side nursing of maternity cases by the Victorian Order of Nurses, are important factors in reducing our infant mortality. It is educational and practical work of this character which will go on saving lives and still further reduce our rate.

3. The work of the medical profession, unheralded, unnoticed and too often unrecognized, is a potent cause of our reduced infant mortality. There never was a day when the average physician was so well versed in diseases of children, or when so much effort was put forth to save little lives. It is to the medical profession that the public owes the improved health conditions of to-day. It is the medical profession which has directed and unfailingly supported this greatest movement of the century—the conservation of child life.

4. The fact that we have an educated public, for I believe there never was a day when the average parent so well understood the proper way to care for children. There is still an appalling amount of ignorance in the land, but knowledge is easier to obtain than ever before, and it is in spreading this knowledge that the Social Service Baby Clinic is doing its greatest work.

Typhoid Fever.

I am sure it will be gratifying to the Board to know that we have had only five cases of typhoid fever during the year. This is a remarkable record, in view of the fact that for the last five years, we have had an average of twenty-six cases of typhoid annually. I attribute this absence of typhoid fever to the steps which we have taken, in consultation with Mr. Fred. Frank, Secretary of the Board of Water Commissioners, of raising the amount of chlorine in the city water. The Water Works officials are now adding .8 parts of chlorine per million parts of water consumed, and I think that we should continue to add this quantity of chlorine until improved preliminary filtration arrangements are provided. We have maintained bacteriological control over the city water throughout the year, and as proof that even the large amount of chlorine now added does not provide absolute safety, it may be mentioned that out of thirty-two bacteriological examinations, in eight instances the presence of Coli. B. was demonstrated.

The Coli. B. is used as an index of water pollution. Its absence is taken to indicate purity. I am of the opinion that it will be necessary in the not distant future to install a modern system of preliminary water filtration.

I am strongly of opinion that bathing at Wilkes Dam should not be permitted and I recommend that the Provincial Board of Health be again approached and requested to declare Wilkes Dam an area within which public bathing should be prohibited.

Smallpox.

We have had 214 cases of smallpox during the year, and with one exception, all these cases occurred in individuals who had failed to get vaccinated within the preceding ten years. It will be apparent to all reasonable people that smallpox attacks the unvaccinated and that any community may be free from smallpox if the citizens will get vaccinated every seven years. With the exception of one imported case the City has been free of smallpox for five months. In view of the fact that probably forty per cent. of our population still remains unvaccinated, it would be unreasonable to expect that we will continue to remain free from smallpox, and I earnestly appeal to those who have not done so to get vaccinated and so protect themselves from this frightful disease.

Venereal Diseases.

The Venereal Diseases Clinic at the General Hospital has now been in active operation for six months. The clinic has demonstrated beyond the shadow of a doubt the necessity for this preventive work. During the month of May, the clinic gave seventeen treatments, in June sixty-one; in July one hundred and two; in August one hundred and eighteen; in September one hundred and forty-one; and in October one hundred and forty. Up to date the clinic has not cost the City one cent. The Provincial Government provided $2,000 towards the cost of establishing and maintaining this clinic for the first year. The Government will continue to provide $1,000 per annum towards the maintenance of the clinic, but this will not suffice to run the clinic.

Five of our local physicians have given their services to the clinic, but it would be unreasonable to request them to continue to give their services unless they were offered compensation for their lost time, to say nothing of the great skill and knowledge necessary to successfully conduct such a clinic. The clinic

is held three times a week and each clinic requires the services of two physicians for three hours. An appropriation of $1,000 a year from the City along with $500 from the Government grant, would provide a mere honorarium to the devoted physicians who have so loyally initiated this clinic. Unless this is done, I greatly fear it will be found impossible to continue this good work.

Venereal Diseases are the greatest scourge of mankind. The prevalence of these diseases is a grave source of danger and ill-health to the public. The loss of child life is appalling. Ten to thirty-five per cent. of all cases of insanity are due to venereal diseases. Ten per cent. of all blindness is due to venereal diseases. These facts demonstrate the value of this work and from a mere dollars and cents standpoint, this City cannot afford to allow this work to lapse.

The salary of the half-time Social nurse has this year been found out of the Government grant. It is a condition of the continuance of the Government grant that a full time nurse be employed and the work has now grown so big that this will be required in any case.

The prevalence of venereal diseases in Brantford is intimately connected with the drab and dreary lives, the lack of home surroundings and the pinch of poverty which so many of our young girls have to suffer. Nietzsche says, "The mother of debauchery is not joy, but joylessness."

Brantford needs a girls' hostel where the door is not locked at 10 p.m. Such an hostel would in the nature of things have to owe its inception to private enterprise and private benevolence. I would earnestly recommend this idea to those societies in our City which have for their object the improvement of living conditions in our City.

Scarlet Fever and Diphtheria.

We have had one hundred and fourteen cases of scarlet fever during the year, the largest number on record. I am of the opinion that the extent of this disease is due to the mild type of the disease prevailing and the consequent failure of some parents to call in medical aid. It will readily be seen that these missed cases constitute a grave danger to the rest of the community. Fortunately we have had no deaths from scarlet fever

We have had sixty-five cases of diphtheria, with five deaths. This is a decrease from the last two years. There is no disease in which early attention is so important as diphtheria, and I have continually urged the importance of calling in a doctor at the first sign of sore throat.

So-Called Minor Contagion.

Measles and whooping cough are more dangerous than scarlet fever. We have had only twelve cases of measles. Twenty-eight cases of whooping cough were reported. I am convinced there were many unreported cases. For instance there were four deaths from whooping cough and not one of these cases was reported.

School Medical Inspection.

Any resumé of Brantford's Health activities for the year, would be incomplete without a reference to the splendid work which is carried on in our schools by the Medical and Dental Department of the Public School Board. This work is under my supervision as Chief School Medical Officer, and without doubt is a

tremendous force for better health in our community. The dental work is carried out by Dr. Cuthbert, and the medical examinations and follow-up work by Dr. C. C. Alexander and his able assistants, the school nurses. The reports of this work are rendered to the Board of Education, under whose authority it is carried on.

Tail Race.

The work of filling in the Tail Race east of Erie Avenue is now completed, and the Board of Works are to be congratulated upon ridding the City of this long standing nuisance. I would recommend that the Tail Race between Erie Avenue and the River, be filled in, in the same way. It might take a couple of years to do this work, but it would be well worth the trouble.

Recommendations Contained in Previous Reports but not Acted Upon.

I beg to draw the attention of the Board to the following recommendations which have never been acted upon, and to request that the merits of these proposals be investigated by the City Council.

1. That the Plumbing Inspector be made an official of the Health Department.
2. That a by-law be passed prohibiting the erection of any stable, fish place or chicken coop within fifty feet of a dwelling house.
3. That the unsanitary common drinking cup be prohibited in public places.
4. That public conveniences be provided in such widely separated areas of the City as the North Ward, West Brantford and Bellview.
5. That a motor ambulance be provided the Health Department to transport infectious cases to the hospital.

Unemployment.

The unemployment and hard times which at present exist in our City, will I fear react harmfully towards the health of the City. We cannot hope to continue the good health of this year if these conditions exist for a considerable time. I greatly fear that many children in our City will not receive this winter the same substantial food and covering which their parents were able to provide when employed full time.

I note in our City that dire necessity is forcing many families to move into smaller quarters. Unfortunately we as a Board cannot remedy these conditions, but I am sure we wish success to those agencies which are attempting to alleviate the hardships of this period of unemployment.

In concluding my Report I wish to thank the members of this Department, the staff of the School Medical Inspection System and the Social Service doctors and nurses for the good work they have done, and to congratulate them upon a record health year for the City of Brantford.

The public are beginning to appreciate that the field of preventive medicine is wide, and is capable of producing results out of all proportion to the small amount of money required to carry on such work.

To the members of this Board I desire to gratefully acknowledge the support and valuable assistance which have been freely given to this Department.

I remain,

Your obedient servant,

W. L. Hutton
Medical Officer of Health.

To the Chairman and Members of the Brantford Board of Health.

Lady and Gentlemen:—

I herewith submit for your consideration my First Annual Report since my appointment on full time as Inspector of Foods.

As my appointment to your Board dates from January 1st last, the period covered by this Report is for ten months only. The period from Nov. 1st to Dec. 31st, 1920, was included in my last Annual Report to the Brantford City Council.

Since my appointment attention has been given to the milk supply of the City. The new Milk By-law has been put in operation. The vendors and producers have all been licensed and the Dominion Department of Agriculture have made the preliminary inspection for the purpose of applying the tuberculin test to all herds, the milk from which will be sold raw in the City.

The total number of vendors licensed in the City is six, and one hundred and seven producers. Eleven hundred and sixty-five cows supply a total of seven thousand eight hundred and ninety quarts of milk daily for the supply of the City, or two million eight hundred and seventy-nine thousand eight hundred and fifty quarts, yearly.

In addition forty thousand eight hundred and eighty quarts of cream yearly are supplied retail to the consumer. Approximately eighty per cent. of the milk is pasteurized.

The premises and equipment of the vendors in the City are in good condition and are kept clean and sanitary. The premises of a great many of the producers are all that can be desired. A number of improvements have been made during the past summer at different farms. Such as new milk rooms built, stable yards cleaned and drained, additional light provided in dark stables, small topped pails provided for milking, and various smaller details in the way of repairs attended to.

Vendors and producers have taken kindly any suggestions I have made in regard to improvements and with their co-operation I am able to say that Brantford is receiving a cleaner and better quality of milk than formerly.

Owing to last winter being very mild, very few icehouses were filled and on this account during the extreme hot weather last summer it was impossible to cool the milk at the farms to the proper temperature. As a result milk soured quickly and it is hoped this difficulty will not be met with next summer.

Consumers can assist greatly in having a good milk supply by:

1. Placing milk in a cool place as soon as delivered by the vendor.
2. Keeping it away from other food or articles that may impart an odor or cause it to sour.
3. Returning bottles clean and not using them for any other purpose than to contain milk.

I have had to refuse admittance to the City of milk from three farms on account of a low percentage of butter fat and from one temporarily on account of sickness among the cows. The license of one producer has been suspended on account of dirty conditions at the farm. Three hundred and ninety-two gallons of dirty milk and three hundred and twelve gallons not properly cooled have been returned to the producer. Sediment tests have been made frequently and have

been exceedingly valuable in showing the producer the amount of dirt in his milk and the necessity of more care in keeping his cows clean and cleanliness in milking.

A number of producers have provided small topped milk pails and have expressed their surprise at the amount of dirt they prevent from falling into the milk during milking.

Two hundred and eighty-four tests for butter fat have been made, the average result being 3.40%. This is an increase over last year of .23%. This increase represents approximately an increase yearly to the consumers of Brantford of twelve thousand one hundred and forty quarts of cream, the approximate value of which is $7,884.

The following table compiled from records in this office shows the gradual decrease in the quality of milk supplied to the City from the year 1897 to 1920, and the increase during the present year.

Year	Average % butter fat for year per cent.	Percentage of tests below 3% butter fat per cent.
1897	3.96	2.1
1904	3.91	4.
1912	3.65	4.8
1914	3.40	9.7
1918	3.37	9.7
1920	3.17	14.4
1921	3.40	8.54

Restaurants and Butcher Shops.

These have been inspected at irregular intervals and are found to be well kept generally. In regard to the restaurants, I am of the opinion that a lavatory should be provided in each for the use of patrons.

Conditions on the local market are better than formerly, but can still be greatly improved. When the new Market By-law is printed and in force, some of the present unsanitary conditions will be removed. But the By-law does not provide shelter and protection to the foods offered for sale, especially meat. Until proper sanitary buildings are provided much disease will no doubt be spread from the dirt from the streets blown onto the foods and from flies also. One thousand and thirty-two pounds of beef, ninety-one pounds of veal, five hundred and eighteen pounds of pork, fifty pounds of mutton, one hundred and forty-three pounds of fish and sixty pounds of butter unfit for food, have been condemned and destroyed.

Your obedient servant.

A. B. Cutcliffe, *Inspector.*

Vital Statistics Year Ending October 31st, 1921.

Population (Assessor's figures)	31,365
Births	804
Birth rate	25.63
Deaths	327
Death rate	10.42
Marriages	313
Infant mortality rate	64.67

COMPARATIVE RATES.

Year	1918	1919	1920	1921
Birth	24	20.36	25.31	25.63
Death	17.7	14.5	12.78	10.42
Infant Mortality	128.6	106.1	90.4	64.67

Notes—

1. Still births were excluded in compiling the above figures.
2. Two deaths that took place outside of the Municipality of Brantford were excluded.
3. No deductions were made of deaths that took place in the B.G.H. where homes were outside the City of Brantford.

DEATHS AT VARIOUS AGE PERIODS.

Still-born	36
Under 1 year	52
1 year and over and under 5 years	13
5 " " " " " 15 "	15
15 " " " " " 25 "	19
25 " " " " " 45 "	35
45 " " " " " 65 "	81
65 and over	110
Age not reported	2
Total	327

DEATHS GROUPED ACCORDING TO INTERNATIONAL LIST OF CAUSES.

Group 1	General diseases	74
2	Nervous system &c.	24
3	Circulatory system	54
4	Respiratory system	43
5	Digestive system	11
6	Genito-urinary system	23
7	Puerperal state	3
8	Skin and cellular	1
9	Bones &c.	0
10	Malformation	5
11	Early infancy	41
12	Old age	19
13	External causes	20
14	Ill defined	9
	Total	327

Our vital statistics would be improved if reports of causes of death were made in accordance with the "international list of causes of death." Such terms as "heart failure" "convulsions" "debility" convey no information, and should not be used. Such terms as "lung trouble" "liver complaint" "indigestion" are too indefinite and should not be used.

Among the specific causes of death (not reportable) are the following: -

Cancer	24
Apoplexy	13
Heart affections	12
Nephritis	9
Old age	19
Pneumonia	31
Bronchitis	7
Premature births	15
External causes	20

STATISTICS OF CONTAGIOUS DISEASES CASES REPORTED YEAR ENDING OCTOBER 31, 1921.

Year	1918	1919	1920	1921
Scarlet fever	38	20	52	114
Diphtheria	44	77	103	65
Typhoid	19	21	19	5
Measles	182	3	249	12
Chickenpox	0	0	29	134
Smallpox	1	14	73	214
Tuberculosis	0	0	12	32
Whooping cough	2	9	51	28
Mumps	0	0	3	189
Cerebro spinal meningitis			1	1
Influenza			366	0
Venereal diseases			48	100
Total	286	144	1056	894

NOTES.

1. We ceased to placard chickenpox June 1st, 1921. It is not proposed to resume placarding unless smallpox breaks out.
2. The policy of allowing smallpox contacts who were vaccinated within the previous seven years to leave the infected house after disinfection to carry on with their work, was approved and adopted by the Board.

DEATHS FROM REPORTABLE DISEASES.

Year	1919	1920	1921
Diphtheria	8	10	5
Typhoid fever	1	1	1
Measles	0	3	1
Whooping cough	2	3	4
Meningitis	4	4	5
Tuberculosis	26	18	19
Influenza	89	34	0
Total	130	73	35

NOTES.

1. Two additional cases of typhoid fever died in the B.G.H. in the year 1921. but the homes were outside of this Municipality.
2. Physicians are not reporting all cases as is required by law. In many instances tuberculosis, whooping cough, meningitis are not known to this office until death takes place. Under these circumstances the Department is unable to take any precautionary or preventive measures.

RECORD OF WORK ACCOMPLISHED.

Water samples examined (70) as follows:—

City water O.K.	24
" " polluted	8
Private wells O.K.	7
" " polluted	21
River O.K. (intake)	1
" polluted	4
Y.M.C.A. swimming tank	5

NOTES.

1. The Y.M.C.A. swimming tank was examined with the idea of making it as safe as possible for the public. While we have not reached the degree of purity we desire, yet as a result of the suggestions given from this office to the Y.M.C.A. authorities, there has been some improvement noted.

2. It is significant to note that of 28 wells examined, 21 were polluted.
3. Where a polluted well was used for human consumption it was closed and city water installed.

Milk samples examined	284
Cream " "	4
(For results see Dr. Cutcliffe's report.)	
Diphtheria swabs examined	346
results—positive 79; negative 267	
T.B. sildes examined	8
results—positive 2; negative 6	
V.D.G. sildes examined	11
results—positive 8; negative 3	
Urine slides examined	20
" for albumen	12
Vaccination office	1,500

Houses Placarded, Fumigated and Released.

For scarlet fever	104
" diphtheria	60
" measles	12
" chickenpox	93
" smallpox	214

Exclusion notices and release certificates issued to over 1,500 school children.

Notices to abate nuisances (all complied with)	24
Notices to make sewer connection	76
Complied with	31
Number of earth closets inspected	620

All laundries periodically inspected—conditions normal.

All stables periodically inspected—conditions normal.

All alley ways and back lanes frequently inspected—in good condition.

It may be noted that Water and Wharf Streets are particularly improved and the owners of these properties are to be congratulated.

Prosecutions	8
Convictions	7

As usual many hundred complaints have been received and the necessary investigations and adjustments made. These complaints come by phone, personal interview and by letter.

Free bacteriological supplies in the nature of serums, anti toxins and the various test outfits have been kept on hand and given to the medical profession and hospital on request.

Four houses were closed due to being unfit for human habitation. There are many houses that should be closed, but are not, on account of the acute housing shortage.

CARLETON PLACE.

To the Mayor and Council, Carleton Place.

GENTLEMEN:—

Herewith my report as M.O.H. for the year ending Nov. 30th, 1921.

BIRTHS AND DEATHS.

Reports were made of 49 deaths, and 92 births, of which 2 were stillborn. The ages of those who died were as follows:—

6 under the age of 6 months	2 between the ages of 31 and 40
6 under the age of 9 months	5 between the ages of 41 and 50
1 under the age of 2 years	4 between the ages of 51 and 60
1 under the age of 3 years	6 between the ages of 61 and 70
1 under the age of 13 years	10 between the ages of 71 and 80
2 between the ages of 20 and 30	5 between the ages of 81 and 90

Comparison of births and deaths.

year	births	deaths
1920	113 (including 3 stillborn	52
1921	92 (including 2 stillborn)	49

Deaths under one year.

1920	11 deaths in 110 births.
1921	12 deaths in 90 births.

It is my opinion that this death rate could be materially reduced if the Town would secure the services of a District Nurse to teach mothers pre-natal care, and the feeding of children, especially those bottle-fed.

Smallpox	5 cases
Chickenpox	110 "
Scarlet fever	13 "
Typhoid fever	9 "
Diphtheria	1 "
Mumps	75 "
Venereal Diseases	7 "

Many cases of infectious diseases among children were discovered when the children applied for a certificate to attend school after having had chickenpox or mumps.

The smallpox cases occurred as follows:—three in January and two in April, all being contracted from outside sources. Isolation, quarantine, and vaccination prevented the spread of smallpox among children, over 100 of whom were vaccinated in 1921. When the public realizes that vaccination and revaccination are the only means of preventing smallpox, and live up to this knowledge, this disease will disappear.

The thirteen cases of scarlet fever were scattered over the year, and it is my opinion that many of these cases occurred when people, who were in contact with patients before the disease appeared, did not report the fact: due, doubtless, to the fear of quarantine. This carelessness and neglect on the part of such people contributes greatly to the spread of this and other contagious diseases.

At present as far as known the town is free from contagious diseases.

During the month of June, in company with the Sanitary Officer, an inspection was made of the town. Some citizens were found who were not conforming to the act regarding the disposal of manure, thus providing a breeding place for flies, to the detriment of the health of themselves and their fellow-citizens.

The act regarding the keeping of pigs was enforced as far as possible, and

some people who got pigs after waiting till the inspection had been completed, were found out and made to conform to the act.

Slaughter houses were inspected and conditions found slightly improved.

Milk.

Dairies were inspected, and orders given to improve sanitary conditions. Many samples of milk were tested for cleanliness. Unfortunately, it has not been possible to compel owners to have their herds tested for tuberculosis. The general opinion seems to be that milk which has a fair amount of cream is pure. Tubercular cattle often give milk which contains plenty of cream, and this milk is often the means of transmitting this disease to children. When the public recognizes this fact we may hope to have this act enforced.

Schools.

All schools were visited and the sanitary conditions inspected, and as directed by the Provincial Board of Health, a copy of the report was sent to the School Board only to be laid on the table.

As reported last year, the sanitary conditions in our schools leave much to be desired, and if the health of children is worth anything, these conditions should be improved. It is useless to teach hygiene in a school which is a striking example of how a hygienic school should not be built. The outbuildings are filthy, and as a child's acquaintance with infectious diseases generally begins with its school life, is it fair to the child to allow such conditions to exist? Also children of five to six are compelled to stay in a room where artificial light is used most of the day. If the citizens of this town value the health of the children greater than a few dollars, they will insist on improved conditions in our schools.

Cases of impetigo contagiosa and scabies, commonly called swine pox and itch respectively, continue to occur among school children, which could be prevented for the most part by the inspection of school children by a District Nurse already recommended in this report.

Conclusion.

The duty of a M.O.H. is, 1st, to suppress and prevent epidemics; 2nd, to save the lives of babies; 3rd, to prolong the lives of adults; 4th, to promote the health and comfort of every body in the community, *but* he is dependent on the response of the public to his appeals to accomplish his work and it is time that the people appreciated the need of this co-operation.

Yours respectfully,

D. H. McIntosh.

Medical Officer of Health.

CHATHAM

Annual Report for the Year 1921.

To the Chairman and Members of the Board of Health of the City of Chatham.

Gentlemen:—I hereby beg to submit my annual report ending the 30th of November, 1921. During the year we have had several small epidemics of contagious disease as follows:—Typhoid Fever one mild case; its origin could not be traced to any particular source. Of Scarlet Fever we had seventy-four cases reported, affecting fifty-five homes; about twenty per cent. of these were quite severe with either ear or cervical glandual complications. The balance were of a mild type which made the situation all the more difficult to control, as the people have a better chance of hiding or concealing the trouble, and it is few under such conditions, if not quarantined, will be even careful about the spreading, no deaths. Of Measles there were one hundred and ninety two; quite a percentage were a severe type, with one death, that of a child of eighteen months, who was rachitic. One hundred and seventy one homes were placed under quarantine. Chickenpox one hundred and twelve in one hundred and two homes. Smallpox two in one home; no deaths. Tuberculosis two, with two deaths. Diphtheria thirteen in twelve homes; no deaths. Mumps one hundred and fifty four. Whooping cough fifty-four cases, with six fatalities, all babies. Erysipelas, two recovered; Cerebro-spinal Meningitis, one died. Sleeping sickness, one case came home sick from Detroit and died, and Itch, one case.

The water provided our citizens during the year has been good with the exception of two short periods, when a few samples showed some contamination. This was always at a time when the chlorine injector was out of commission so that some water entered the city mains without chlorination. This could be easily overcome should our Water Commission take the necessary steps to provide a proper filtered water basin where all water before entering the city mains would be chlorinated without having to use a high pressure pump to inject the chlorine, which is at all times liable to adjustment repairs. Three new filters were installed early in the year making eight in all with a normal daily capacity of two million one hundred thousand gallons, while the amount used in the same time varies from one million five to eight hundred thousand gallons. This surplus would also provide for easing off of the capacity pumpage when the filtered water basin is constructed, and then our citizens need have no fear about its safety for use for all domestic purposes as the chlorine would have at least forty minutes to one hour to act before entering the city mains instead of, as now, receiving the chlorine when entering the mains. Chlorine is used in the water the whole year round but very much less quantity in the winter months. The one mild case of typhoid goes to show that our city analyst, Dr. Mustard, and City engineer Fuller, are watching our city water supply carefully. We hope that our new water Commissioners will take active measures to meet this need at a very early date.

There have been more or less just complaints about handling and disposal of the city garbage during the past year though I am sure it was an improvement on former years. This troublesome matter has been disposed of for all time by a vote of the citizens on a By-law submitted in November and carried by a vote of three to one authorizing the City Council to immediately proceed with the construction of a suitable incinerator to take care of the garbage of the future.

The city's milk supply for the year has been quite satisfactory so far as solids and butter fat are concerned: but not so with regard to cleanliness. I have found that about two thirds of the producers are more or less careless about proper cleaning of the cow before milking, with carelessness of person milking. In some cases owing to this, considerable sand and fine particles of manure find their way into the milk pail and then into the milk bottle, thence to the consumer. The other third should be commended for the care they have shown by producing really clean milk. Warnings have been sent out to the careless, and in many instances the results of the tests have been published in the local newspapers, with the object of giving credit to all who are producing good clean milk, while to the careless it is a warning to improve conditions or they will find themselves liable to police court proceedings without any possible ground for excuse in not correcting the cause for complaint.

During the year I tested one hundred and eighty six samples of milk for butter fat solids and cleanliness. Our city By-law requires 3.5 per cent. butter fat and 12 per cent. solids. Over eighty per cent. of the producers filled, or more than came up to the requirements.

Our population at the beginning of the year as given by the assessors is 15,525 with a birth rate for the year of 400 which means 25.7 per thousand; this including twelve premature births were 38: this means a death rate of 9.8, while if we leave out the premature cases it would give a death rate of 6.9. The total number of deaths of all ages were two hundred and fifty one.

Venereal Diseases reported are twenty-five of Gonorrhoea and nine cases of Syphilis. It is quite evident that many of the cases are not being reported as the above number were handed in by less than half of the Doctors of the city. The reason for withholding this important information is hard to understand since all are reported by serial number.

Baby Clinic.

Through the efforts of kindly disposed citizens, and Doctor McNally, our District P.H.O., with Dr. Bell of Toronto and Public Health nurse, Miss Riddel, along with the hearty co-operation of nearly all the local medical men, and financed by the ladies of the local Red Cross society, a Well Baby Clinic has been established and been in operation since the latter part of May, and has been carried on quite successfully since the last week of July under the guidance of our Health nurse Miss Anna D. Beck. The following is a short summary of the work accomplished since July 25th, the date of Miss Beck's appointment as Public Health Nurse for the city of Chatham. There were 206 babies registered under the Provincial Health Nurse, Miss Riddle; of these 104 came the opening days and only came the once. They either lived in the country or gave wrong addresses and have not been located since. When our data cards were printed only those who had attended more than one clinic were copied, the rest were turned in to the Provincial Board of Health. At present 247 babies are registered, 80 have attended more than once, the balance from twice to fifteen times.

In August well baby clinic attendance was 128 and number of visits made were 208
In September well baby clinic attendance was 129 and number of visits made were 201
In October well baby clinic attendance was 114 and number of visits made were 197
In November well baby clinic attendance was 182 and number of visits made were 196.

There are 22 prenatal cases registered with this clinic, one tuberculosis case and 4 syphilitic cases.

(Signed)—ANNA D. BECK,
Public Health Nurse for Chatham.

PUBLIC SCHOOL NURSE—MISS MARY NORTHWOOD'S REPORT.

A summary of the School Nurse's work in the Chatham Public Schools: Her duties are confined toward aiding as much as possible in the improvement of the physical and general condition of the nineteen hundred pupils of the city schools, such as finding any defects and then calling the attention of the parents and where necessary urging medical or surgical treatment in order to correct these defects. Also by talks on hygiene from its many aspects; and getting the children interested in the knowledge that fresh air, cleanliness, proper food well masticated, some milk and a plentiful supply of good water each day, with long hours of sleep in well aired rooms are among the chief ways of making their lives useful during their school life, by thus developing a strong and healthy body and strong mind.

My time is divided among three quite large schools. Two days each week is spent at Queen Mary school, with a day and a half spent at each of the others, Central and McKeough schools. Regular hours are observed and certain time allotted to each class, for an inspection of the pupils; the juniors being inspected twice monthly and the seniors once.

At a time of any serious contagion or any special cases that may come to my attention the regular routine has to make way for the more important that arises.

The assistance of the teacher means much, as, unless her aid is given in observing and sending to me for inspection or examination of such defects as are apparent to her in the classroom, one person working among hundreds of pupils and spending at the most only eight days in each school can do but little toward improving the physical wellbeing of the future manhood and womanhood of fair Canada.

Since January last twenty-five per cent of all the pupils have had their teeth attended to, forty-four pupils have had defective vision corrected by the aid of glasses or through treatment. Fifty-five children have had enlarged and diseased tonsils removed, as well as having any obstruction of the nasal passages cleared away. There have been twenty-six ear cases treated by the Doctors, while I have made two hundred and twenty home visits.

The question of children being sent to school from homes where a child has an unreported contagious disease, keeps one constantly on the alert, as we find this thing frequently happens, thereby causing the disease to spread among their class mates and to other homes.

(Signed) T. L. MCRITCHIE,
M.O.H.

REPORT OF SANITARY INSPECTOR D. H. HOLMES, YEAR 1921.

Mr. Chairman and Members of the Board of Health: As Sanitary Officer I wish to submit the following report for the year ending the 30th day of November, 1921. The number of homes placarded for contagious diseases were as follows: Scarlet fever fifty-four, Measles one hundred and seventy-one, Chickenpox seventy-four, Smallpox one, Diphtheria twelve. I disinfected two hundred and twenty-four homes, and also disinfected the following schools viz, the Collegiate Institute, Central school, the McKeough school, the Queen Mary school and St. Joseph Separate school, the Canada Business College and the Public Library.

Inspected slaughter houses nine times, all the butcher shops fourteen times, all the cafes sixty times and all our laundries fifty-five times. Gathered one hundred and eighty samples of water for analysis by the Department laboratories at London and Toronto. Collected one hundred and sixteen samples of milk that were tested out by the Medical Officer of Health and sixty one samples tested for the milk dealers as to cleanliness. Made seventy-eight calls on families that were under quarantine and needed necessary supplies until the quarantine was lifted.

Attended the market on two days every week as Inspector of food stuff offered for sale, where I condemned as unfit for food two carcasses of veal, one of beef, five lots of fowl, two lots of butter and five lots of fish. Notified the garbage collectors during the year to gather up from the different streets thirty-two dead dogs, twenty-eight cats, three rabbits, and nine chickens.

Had five different lots of hogs moved in compliance with the city By-law respecting this matter. Had eleven horses that were lame or had other ailments laid up and given proper care, while had three killed. Laid five Police court charges one the breaking of quarantine, the others connected with milk and fish.

Had one thousand one hundred and twenty four outside closets properly cleaned by the scavenger during the year under sanitary conditions as far as possible.

(Signed).—T. L. McRitchie,

M.O.H.,

COBALT.

To the Local Board of Health of the Town of Cobalt, Ontario.

Sirs:—

Your Medical Officer of Health and Secretary beg leave to submit the following report on Sanitary conditions and Vital Statistics to December 1st, 1921.

Vital Statistics.

The total number of births recorded during the year to December 1st was 152. The total number of deaths occurring in the year was 45. Of the deaths, there were four from infectious diseases, namely, two from diphtheria and two from tuberculosis. Three deaths resulted from accidents. The following cases of infectious diseases in the Town during the year to December 1st were reported:

Scarlet Fever	3
Diphtheria	28
Smallpox	7
Tuberculosis	4
Typhoid Fever	1

It is noticeable that there were no deaths from Typhoid fever during the year and the only case which came to the notice of the Medical Health Officer was one which did not originate in the Town. All of the cases of infectious diseases were quarantined and the usual regulations with such cases carried out.

The cases of smallpox were of a mild character and easily controlled.

The new Isolation Hospital established by the Town and the Township was put into use for about one month and was closed on the discharge of the cases, two cases in all being treated at the Isolation Hospital and the other cases being treated in the homes of the patients.

Garbage Collection.

The garbage collection has been regularly and efficiently done by the Contractor. The few complaints that were made, received prompt attention.

Water.

Samples of water have been sent to the Provincial Laboratories regularly. All samples show some contamination in about 50 C.C. of water. This condition has always prevailed. The condition of the water is not sufficiently dangerous to warrant the condemnation of the water for domestic use and is not alarming. We think the condition of the West Cobalt dam is responsible for what degree of danger from contamination may exist in the Town water supply and we have recommended that this dam be repaired. This recommendation has been approved by the Local Board of Health and referred to the Council for action.

Dairies.

The milk supply has been reasonably satisfactory during the year, although during the winter months the butter fat content of the milk was low in all the dairies, the lowest being 2.4 per cent. and the average 3.65 per cent. The milk supply of the Town comes from five dairies which have been inspected at regular intervals and each of which have been found to be in satisfactory condition.

Inspection.

The Schools were inspected and found in good condition.

Two different premises found to be in an unsanitary condition were closed as being unfit for occupation. Both of these places after having made the improvements required by the Board of Health have been re-opened.

The market is regularly inspected by the Sanitary Inspector and conditions there are found to be satisfactory.

One stable in the vicinity of St. Patrick's Separate School was caused to be closed and other stables were ordered closed until made to conform with the By-Law.

Prosecutions.

Two cases of breaches of the Milk By-Law were prosecuted, one of which case was dismissed and a fine imposed in the other case.

General.

The foregoing statistics show that the general health of the Town has been good. We were rather fortunate in not having had any serious epidemic of infectious diseases.

In closing we wish to thank the Local Board of Health for its co-operation in enforcing the health regulations.

E. W. Mitchell
Medical Officer of Health.

R. C. O'Gorman
Secretary.

COLLINGWOOD.

To the Mayor and Council.

SIRS:—

I herewith submit to you my report for the year ending October 31st, 1921.

Statistics:—

Births	119
Deaths	96

Classifications of deaths:—

Tuberculosis	8
Diphtheria	1
Accident	8
Old age	9
Under 2 years	9
Stillborn	6

RE TUBERCULOSIS.

I regret that we have had more deaths from this dreaded disease than usual, but hope through the improvement in our milk supply and the educational work of our Public Health Nurse, that the mortality may be lessened. The Provincial Board of Health requires that all these cases be reported to the M.O.H.

RE INFANT MORTALITY.

It is very gratifying to note the decrease in the death rate of children under two years which I attribute to better milk supply and improvement in feeding.

RE COMMUNICABLE DISEASES.

We have been free from any epidemic during the year. The cases reported are as follows:—

Chicken Pox	15
Diphtheria	6
Infectious Disease	2
Measles	1
Small Pox (Imported)	1
Scarlet Fever	3

I would again urge that all suspicious cases be reported at once. It is very important, first, to prevent the spreading, and second, that treatment should be instituted early, especially in diphtheria, as antitoxin should be administered early. Antitoxin is supplied free by the Provincial Board of Health.

RE TYPHOID FEVER.

Our town has been almost free of this disease. Cases of typhoid should also be reported according to the regulations.

Our veterinary inspector has made regular inspection of dairies, and reports improvement. We are very anxious to obtain pure, wholesome milk for our citizens, and are endeavoring to have the dairies up to the requirements necessary before the Dominion Veterinary Inspector makes the Tuberculin test of all cattle. We hope to have this done soon.

Owing to the very mild winter our ice supply was somewhat limited and in consequence of higher cost. This was a detriment to health, as without ice it is impossible during the hot summer months to keep foods, especially milk, as they should be.

The town water has been regularly analysed by the Provincial Board of Health and when found dangerous the citizens were advised to boil it. During

the latter part of the summer the analysis showed it to contain coton bacilli. This, I believe, was due to the intake pipe not being out far enough to avoid any contamination from Pretty River. At the same time the Chlorination Plant was out of commission. The yards adjacent to the river were inspected and any suspected source of contamination ordered to be removed.

We applied to the Provincial Board of Health for a Public Health nurse to give practical demonstrations in Child Welfare and Clinical Work. Miss Castle was sent, and up to October 31st five clinics were held with an aggregate attendance of 70. A doctor attended each clinic. 18 cases required advice re feeding. 8 referred to family doctor for operation or treatment. Miss Castle also made 335 home visits. You may judge by this the beneficial work the public health nurse does and I wish to express my appreciation here of the excellent and capable work done by her. I believe Miss Castle has permission to continue her work here till the end of the year and we are hoping, through the courtesy of the Board of Education, to have the school nurse devote some of her time to this very valuable work.

Supplying milk to malnourished children at recess has been found to be very beneficial in schools where it has been tried and I would consider it advisable to test the efficiency of it here.

The Board of Health is always ready to receive complaints about any unsanitary condition and will immediately endeavor to remedy anything justifiable.

I would advise, (*a*) that we have a municipal dairy where milk would be delivered by the producer to one central station, there to be tested, pasteurized, bottled and delivered under proper sanitary conditions.

(*b*) The intake pipe to be extended to deeper water.

(*c*) A municipal garbage system be instituted, requiring all organic refuse to be placed in fly-tight cans and all garbage regularly carted away and properly treated.

(*d*) That all bread be wrapped.

I wish to express my appreciation of the valuable and cheerful assistance rendered me by the sanitary inspector the Chairman and members of the Board.

I remain,
Yours respectfully,
DONALD MCKAY.
Medical Officer of Health.

CORNWALL.

To the Chairman and Members of the Local Board of Health.

GENTLEMEN :—

In accordance with the requirements of the Public Health Act I beg to submit my annual report on the sanitary conditions of the Town for the year 1921.

In the beginning of the year the Corporation of the Town appointed two of our policemen as sanitary inspectors and these officers have during the year inspected the various portions of the town continuously and as a result the municipality has been kept in a sanitary condition as far as possible.

The water supply of the town has been examined by the Provincial Authorities on several occasions and although some minor chemical defects have been found, nothing injurious to the health of the community has resulted.

The Chlorinating Plant which was inaugurated in 1920 has continued to act most successfully and whether as a result of this chlorinating system or otherwise, I am able to report that practically no typhoid has originated within the Municipality, wit hthe exception of two or three cases.
and western portions of the Town have been furnished with a good system of cellar drainage and in many instnces the ratepayers have at their own expense installed septic tanks and in this way have been able to avail themselves of the sewerage system. This portion of the Town has also been supplied with an extension of the water system giving to all the residents of the northwest section good and wholesome drinking water. As a result, an order has gone forth closing all wells on the line of the water supply.

The eastern and southern portions of the town have also been benefited by the extension of the water system.

Almost continuously during the year closing, we have had isolated cases of scarlet fever, measles and diphtheria. In the latter months of the year and at the present time, we are passing through quite an epidemic of contagious diseases, namely, scarlet fever, measles and small-pox. The small-pox and scarlet fever are of a very mild type but diphtheria has been more fatal, several deaths having occurred as a result of the epidemic.

In the latter months of the year, Fly Creek, which is the main drainage system for surface water, running from north-east to south-west through the town and entering into the River, was opened and cleaned, which has greatly improved the surface drainage along its course.

I have again to draw the Board's attention and would earnestly suggest that they place the matter before the Municipal Council, that we are as yet unprovided with any suitable building, which can be used as an Isolation Hospital for the care of Contagious diseases, which our town is required to support. Owing to this cause, the expense of caring for whole families is getting to be quite an item and a great saving could be effected, if some means were adopted for the isolation of contagious diseases, dependent upon the Corporation for maintenance.

In view of the fact, that at the east and west of the Town are two Villages, being part of the Township of Cornwall, and practically the Town of Cornwall, I would suggest that a conference between the municipalities of the Township of Cornwall, and of the Town of Cornwall, be called, with the view of establishing a building, which could be used for both municipalities. If this were done,

money would be saved, instead of expending the very exorbitant amounts, which are required to care for communicable diseases, as matters exist at the present time.

I have to thank you, Mr. Chairman and the Members of your Board, as well as the medical men of the Town, for the assistance they have given me in the carrying out of the various requirements of the Public Health Act.

All of which is respectfully submitted,

(Sgd.) C. J. HAMILTON.
Medical Officer of Health.

DUNNVILLE

DR. JOHN W. S. MCCULLOUGH,
Secretary Provincial Board of Health,
Toronto, Ont.

Dear Sir,—

I beg to submit herewith the Report of the Local Board of Health of Dunnville for the year 1921.

The following communicable diseases were reported to the Local Board, *viz.* measles 10 cases, typhoid fever 4, diphtheria 7, and scarlet fever 23. From these fatalities occurred in one case of typhoid-pneumonia and two of diphtheria, one of which came from outside the municipality, being discovered in transit on the railway.

The Sanitary Inspector reports over two hundred visits, conferences and communications in pursuit of his duties. These include the usual quota of nuisances, which in the majority of cases have been removed without friction. A few such cases are still pending, but these are being closely followed up by the Inspector.

Dr. C. A. M. Thrush, M.O.H., has, during 1921, given special attention to matters pertaining to the health of school children. In conjunction with the School Nurse in the earlier part of the year, and supported by the Municipal Council in connection with medical, surgical and dental treatment of children of indigent parents, a great deal of work was done which was hitherto unattempted.

Early in the year the M.O.H. again impressed upon the Local Board of Health, and through it upon the Municipal Council, the necessity of a system of garbage collection, and of an improved water supply. The former was arranged by the inauguration of a semi-weekly collection of garbage, which has proved quite satisfactory, but the latter still remains one of Dunnville's greatest banes.

Throughout the year, an almost continuous daily supervision of the water used for domestic purposes was maintained by analyses by the the Laboratories of the Provincial Board of Health. With very few exceptions these showed the presence of bacteria of intestinal origin, and in some cases the pollution was dangerously heavy. The M.O.H. has strongly advised boiling the water; and he has also recommended treatment by anti-typhoid vaccine.

At various times throughout the year, the installation of a liquid chlorine apparatus in connection with the present water-works system was recommended, in place of the crude arrangement now in use which is obviously inefficient. Since it was shown that such an up-to-date chlorinating plant could later be attached to a new filter, the recommendation seemed feasible, with a prospect of some improvement, but the Public Utilities Commission which manages the water-works has made no move in this matter.

A sanitary survey of the Town was made in mid-summer by officials of the Provincial Board of Health. Besides several recommendations relating to sewers, sewage disposal, and other matters, the report contained the result of analyses of samples taken from nearly two hundred wells from which water was being used for domestic purposes. Only one of these proved to be free from pollution.

On August 19th, while the Municipal Council was preparing to submit a by-law to the rate-payers for the necessary expenditure for a new filter and pumping-plant, the Chairman of the Public Utilities Commission served an order of the Provincial Board of Health on the Council, for the installation of the proposed

works. The by-law was submitted in September but was defeated by the vote of the people, and there the matter rests, awaiting action by the incoming officials of 1922.

Yours faithfully,
JOHN CLARK,
Secretary of the Local Board of Health.

FORT WILLIAM

Fort William, Ont.
November 1st, 1921.

To the Chairman and Members, Local Board of Health, Fort William, Ont.

Gentlemen:-

I beg to submit herewith my report for the year ending October 31st, 1921:

Vital Statistics.

Estimated population 20,086
Death rate per thousand population of all deaths registered 12.84
This rate is 3.94 lower than that of last year. 2.37 of the death rate last year was due to flu. This year the rate from flu is practically nil.

Thirty-six non-residents died in this municipality. Ten deaths occurring in other municipalities were registered here. Excluding these the death rate is 10.50.
Birth rate per thousand population 36.64
Infant mortality rate per thousand births 107.05

As far as I am able to ascertain, this is the lowest rate in the history of this municipality. The reason for this low rate is largely due to the hot dry summer. Heat without rain breeds no flies.

Twelve persons were summoned to court during the year. The causes for summons were as follows.

Breach of milk by-law	4
Failure to comply with notice re nuisance	2
Carrying on an offensive trade without license	1
Breaking quarantine	3
Killing hogs on premises contrary to law	2

All of these were convicted and paid fines aggregating $216.00.

The following products and supplies from the Provincial Board of Health were distributed:

Diphtheria Antitoxin	2,557,000 units
Tetanus Antitoxin	41,000 units
Pertussis Serum	570 c. c.
Smallpox Vaccine	2,600 tubes
Sterile Swabs	118 swabs
Influenza Serum	70 c. c.
Typhoid Serum	36 doses
Silver Nitrate Solution	96 ampules
Phenarsenamine	60 ampules

The activities of your department this year included the establishment of a well baby clinic. This is now on a permanent basis, clinics being held in the city hall Tuesdays and Fridays, from four to five p.m.

During the summer months clinics were held in Wesley Institute in Ward one and in Ward four branch library.

In the month of August I conducted a pre-school clinic for all children intending to enter school this fall. This was of considerable value in discovering many remediable defects.

A very distinct step forward was the establishment on September first of a clinic for the treatment of venereal diseases in the McKellar General Hospital, under the auspices of your board in co-operation with the Port Arthur board of health.

This clinic is intended to serve the entire district of Thunder Bay. The laboratory is under the immediate direction of Dr. Walter P. Hogarth, who is eminently qualified to carry on the work. He and his assistant, Miss Irene Saunders, graduate nurse, have been added to your staff. The extent of the work being done is shown in that seventy-five treatments were given in October.

Your board is to be congratulated on the conclusion of the epidemic of scarlet fever which lasting three years, created much controversy and for its mildness was without parallel in the history of the disease. I wish to add that I appreciate very much your support of my conduct of affairs at all times during the course of the epidemic and I do not hesitate to say that such action was of inestimable value in obtaining the end result. Such support is an impetus to all your staff to endeavor constantly to do better work.

You are to be congratulated on the low death rate and infant mortality rate shown this year. While part of this is due to natural causes there is no doubt that some part is due to your great interest in all problems pertaining to the health of our citizens.

Not the least pleasing part of this report is that these increased activities have been accompanied by a very considerable reduction in the per capita cost of the department, viz: 16 cents. I think it can be truly said of your department that economy with efficiency has been your watchword throughout the year.

Then, too, the decision of your board to make a systematic collection of the isolation hospital accounts has resulted in the obtaining of more than fifty per cent. of the total cost of the administration of the hospital for the year. The policy now followed will result in a constant improvement in collections.

During the year I made twenty-five visits and held fifteen consultations for medical relief cases.

Smallpox.

There are ten cases of this disease reported. There were no deaths. Statistics follow:

Cases	M.F.	under 5 yrs	5-9 yrs.	10-14 yrs.	15-19 yrs.	over 19 yrs.	Recovery	Deaths
201	92 109	32	92	48	7	22	195	5

	Cases	Deaths
1917	3	0
1918	2	0
1919	0	0
1920	24	0
1921	10	0

Scarlet Fever.

There were two hundred and one cases of scarlet fever reported during the year with five deaths. This is one hundred and one cases less than last year. Statistics are as follows:—

Classes	M.F.	5 yrs.	yrs.	yrs.	yrs.	yrs.	very	Deaths

Diphtheria.

There were twenty-four cases of this disease reported, with two deaths.

1917	13	1
1918	12	2
1919	22	1
1920	22	1
1921	24	2

Measles

There were six hundred and sixty-two cases of measles reported, with seven deaths

1917	338	3
1918	12	0
1919	0	0
1920	384	5
1921	662	7

Whooping Cough.

There were one hundred and four cases of whooping cough reported, with three deaths.

1917	10	17
1918	259	1
1919	2	0
1920	60	3
1921	104	3

Erysipelas.

1917	13	1
1918	4	0
1919	1	0
1920	19	1
1921	16	0

Chickenpox.

1918	75	0
1919	31	0
1920	72	0
1921	193	0

Rubella.

1918	25	0
1919	1	0
1920	0	0
1921	0	0

Mumps.

1918	92	0
1919	1	0
1920	0	0
1921	5	0

Pulmonary Tuberculosis.

There were twenty-two cases of tuberculosis reported of which five cases came from other municipalities for treatment at our general hospital. There were eight deaths, three of which were non-residents.

Influenza.

There was but one case of influenza reported, with two deaths.

Poliomyelitis.

There were seven cases of this disease reported, with one death.

Typhoid Fever,

There were fourteen cases of this disease reported. The sources of these cases were:—

S.S. Noronic	1 case
S,S, E.B. Osler	1 "
S.S. Glencairn	1 "
Dryden, Ont.	1 "
Moose Hill, Ont.	1 "
Stanley, Ont.	3 cases
Cloud Bay, Ont.	3 cases

The probable source of infection in two other cases was rural as they had been out of the city. One case, brother of a patient, was infected before a diagnosis of the original case was made.

All cases were nursed at the McKellar Hospital with one exception. One of the cases infected at Cloud Bay died.

A general resumé of the communicable diseases reported follows:—

	Cases	Deaths
Smallpox	10	0
Scarlet Fever	201	5
Diphtheria	24	2
Measles	662	7
Whooping Cough	104	3
Erysipelas	16	0
Chickenpox	193	0
Rubella	0	0
Mumps	5	0
Tuberculosis	22	8
Influenza	1	2
Typhoid Fever	14	1
Primary Pneumonia	76	11
Poliomyelitis	7	1
Syphilis	27	1
Gonorrhea	42	0
Chancroid	1	0
	1,405	41

Isolation Hospital Report.

Patients admitted.—

Scarlet Fever	65	cases
Diphtheria	14	"
Smallpox	6	"
Measles	1	"
Total	86	"

Hospital days 3423

There were four deaths, two from scarlet fever and two from diphtheria. The two deaths from scarlet fever were malignant cases. One death from diphtheria was a case brought to the city suffering from the disease, in which treatment, though instituted immediately on arrival here, was too late to save the patient. The other fatal case of diphtheria was in the hospital but one hour and ten minutes.

The type of scarlet fever this year was worse than last. This necessitated more exacting nursing.

The following operations were performed at the hospital:—

Myringotomy	6
Mastoid	4

Financial Statement.

Debit:

Salaries of staff	3,628.00
Temporary Employees	1,012.72
Maintenance Account	3,889.89
	$8,530.61

Credit:

Accounts collected	4,289.01	
Garden Produce	150.00	$4,439.01
Net cost of operation		$4,091.60
Cost per patient per diem		$2.49

Visiting Health Nurse's Report.

Miss Gerry made three thousand four hundred and forty-three (3,443) calls and attended clinics on twenty-nine occasions and training class on four occasions during the year. Classification of these calls follows:

Month	New Born Babies	Breast Fed	Cows' Milk	Miscellaneous Foods	Special Calls	Revisits to Infants
1920						
Nov.	35	24	7	4	10	322
Dec.	36	19	10	7	4	298
1921						
Jan.	74	66	4	4		146
Feb.	49	43	2	4	16	186
Mar.	29	25	3	1	5	59
Apr.	47	41	2	4	12	181
May	48	39	1	8	5	219
June	60	45	8	7	14	260
July	46	37	4	5	12	262
Aug.	74	68	1	5	9	213
Sept.	41	38	1	2	4	190
Oct.	57	49	2	6	13	189
Totals	596	494	45	57	104	2525

Other calls not classified above were:

Prenatal Calls	113
Tuberculous Cases	25
Visits to certify children back to school	68
Taking swabs	12

Laboratory Report.

Dr. N. O. Thomas, director of the laboratory of the Provincial Board of Health has very kindly given me a report of the work done in the local laboratory for this municipality. Herewith Dr. Thomas' report.

Dr. E. B. Oliver, Medical Officer of Health, Fort William, Ont.

Dear Doctor:—

Following your request, I beg to submit summary of work done in this laboratory for the City of Fort William for the last twelve months.

Diphtheria.

Release swabs		
Positive	62	
Negative	69	
Total		131
Swabs for diagnosis		
Positive	51	
Negative	164	
Total		215

Tuberculosis.

Sputum examinations		
Positive	45	
Negative	234	
Total		279

Typhoid.

Widal agglutination tests		
Positive	18	
Negative	35	
Total		53

Syphilis.

Colloidal gold test		8
Wasserman test		
Very strongly positive	101	
Strongly positive	11	
Weakly positive	11	
Negative	524	
Total		647
Treponema pallida (dark field)		
Positive	3	
Negative	3	
Total		6

Gonorrhoea.

Smear examinations		
Positive	36	
Negative	123	
Total		159

Milk Examinations		
Fat content	238	
Antiseptics	5	
Bacteriological	3	
Total		246
Water Analysis		
Bacteriological		45
Miscellaneous Analysis		
Total		451
Grand Total		2240

You will see that we exceeded last year's total for your city by about 500 analyses. This I think speaks for itself in the matter of co-operation of the city health officer and physicians with this laboratory in the interests of the health of this community.

I am,
Faithfully yours,
N. O. Thomas

Dr. E. B. Oliver
Medical Officer of Health,
Fort William, Ontario

In addition to this I have examined several dozen specimens from farmers for butter fat percentage in my own laboratory.

Summary of Milk Tests:

Name of Vendor	No. of Tests	Fat Average
Jas. Otway	18	3.44
H. Crabtree	17	3.41
F. Widnall	12	3.38
H. Dougherty	13	3.35
B. Webster	15	3.33
Ed. Otway	14	3.23
F. McCarthy	18	3.20
Kellough Bros	20	3.18
F. Morris	20	3.16
F. Scollie	14	3.15
Thompson Bros.	7	2.94

During the year (April 1st) Fred Widnall took over the dairy of Thompson Bros. Still later the Thunder Bay Dairy Products Co. took over the business of F. Morris. One test of milk from this company went 3.3 for butter fat.

Most of the samples were clean.

One dealer was in court for offering for sale milk with a low fat percentage.

Sanitary Inspector's Report.

A. J. Bolus, M.R.S.I.,
Sanitary Inspector.

Dr. E. B. Oliver, Medical Officer of Health, Fort William, Ont.

Dear Sir:—

I beg to submit herewith for your approval my report of the work done in this department for the year ending October 31st, 1921.

Visits to Business Premises.

Continual watchfulness has been exercised over all places where food is sold, or food stuffs prepared for sale, or stored. Generally speaking conditions in this respect are good, but some of the smaller places are difficult to control and I am doubtful if the small amount of business they do warrants their existence.

Number of visits made:

Butcher Stores	481
Bakeries	125
Candy Stores and Cafes	971
Cafe and Rooming Houses	250
Grocery Stores	631
Second Hand Stores	94
Apartment blocks	96
Total	2648

Seventeen pounds of butter were seized and destroyed.

Dairies.

There are now thirteen dairies operating in the city, three of which obtain their milk from district farmers, the others keeping their own cattle. A very decided improvement is to be noted during the past year in the operation of at least three of the dairies. The others to a lesser extent have advanced in this respect, with the exception of one man who has received a final notice to carry on as required by this department or quit the business.

During the year one hundred and seventy-one samples of milk were taken from rigs in the street for the purpose of testing.

One hundred and thirty visits were made to dairies.

Abattoir.

I am pleased to report the abattoir continues to operate under satisfactory conditions. It will be noted that the number of animals killed is slightly in excess of last year but on a revenue basis the business would be less as more hogs and sheep were killed and a less number of cattle.

The alterations and repairs which I asked should be made to the abattoir last year have been done, and it is in a more sanitary condition and has greater facilities for proper operation. The small water supply pipe in use last year was sufficient for working purposes, but as it was the only water entering the sewer on McLaughlin Street, it was necessary to ask the engineer to have the street sewer flushed out at intervals. A compromise was, however, made by having 1-in. water pipe installed in the killing room, which pipe is however, only required to flush the sewer.

I made 257 visits to the abattoir. Practically all the meat was inspected by me. Three thousand eight hundred and seventy pounds were condemned as unfit for food, including five hogs with cholera, one hog tubercular, two cattle tubercular, two calves tubercular, three cattle slaughtered after injury in transit and one sheep carcase and other meat for various causes.

Summary of Animals Slaughtered.

	Cattle	Pigs	Calves	Sheep	Total
Nov. 1920.	191	18	21	2	232
Dec. 1920.	122	15	33		170
Jan. 1921.	112	76	28		216
Feb.	71		9		80
Mar.	94	6	129	13	242
Apr.	71	6	80		157
May	70	14	80		164
June	106	48	170	67	391
July	81	8	120	17	226
Aug.	145	2	117	24	288
Sept.	126	27	154	3	310
Oct.	126	94	140	59	419
Totals	1315	314	1081	185	2895

MEAT CONDEMNED.

Nov. 1920.	1130 lbs.
Dec. 1920.	—— lbs.
Jan. 1921.	—— lbs.
Feb.	—— lbs.
Mar.	300 lbs.
Apr.	470 lbs.
May	750 lbs.
June	620 lbs.
July	350 lbs.
Aug.	90 lbs.
Sept.	—— lbs.
Oct.	160 lbs.
Total	3670 lbs.

COMMUNICABLE DISEASES.

During the year I made eight hundred and twenty eight visits to homes in connection with communicable diseases, seven hundred and eighty-four of which were in the months of November, December and January whilst the measles epidemic was with us.

THE MARKET.

The public market was opened on the tenth of May and is still in operation, Tuesdays and Fridays being the days of business. The place has been extensively used by the farmers, and the produce offered for sale has at all times been of good quality and properly handled. In response to my request last year no horses have been allowed to remain in the building this season, result, few flies. The Market has been at all times kept in a sanitary condition.

SEWER CONNECTIONS AND PLUMBING INSTALLATIONS.

During the year sixty-nine old premises have been provided with proper sanitary connections, twenty-five of which were installed by the city. It is to be hoped that the Board will be able to secure an appropriation so that in the coming year we may be able to eliminate more of the undesirable privies.

NUISANCES.

All nuisances found by me or reported to this office have been dealt with as found expedient, many verbal orders and requests having been made and where these have not sufficed written notices have been given.

One hundred and fifty-two written notices were sent out during the year. Five cases were taken before the Police Magistrate.

It is gratifying to note the improvements this year in the East coal dock section of the city. This I believe is the outcome of the various improvements made by the works department and the better system of garbage collection now in vogue, thereby giving the people an incentive to do a little for their own benefit.

The animals in the coal dock are not less than they have been but are now kept in a more cleanly condition.

The cost of lumber having gone down to a more reasonable price, I hope this coming spring to have the manure boxes and privies put in better shape.

WHOLESALE BUSINESS PREMISES.

No complaints have been received from any source in regard to the conduct or conditions of the wholesale houses supplying food stuffs, and visits of inspection

have shown the same to be operated in a cleanly manner and kept in a very creditable condition.

Summer Resorts.

Coney Island Beach was opened as a summer resort. Steps were at once taken to control the sanitary arrangements.

Chippewa Park was visited on several occasions. This place is still in the control of the Parks Board and is not fully open to the public, who however have had opportunities to see for themselves a real resort in the making.

Pulp Mill.

I have made several visits to the pulp mill in an endeavor to get proper sanitary plumbing installed, but it seems this item is to stand over until the future additions are decided upon.

Generally speaking the accommodation provided for the men is satisfactory and kept in good order.

At his request I met the C.N.R. Engineer in charge of water supply, with Mr. Dooney, in regard to certain alterations and additions to the main serving the pulp mill, with a view to the prevention of contamination of our water supply.

Schools.

Visits have been made to each of the Public and Separate Schools. A detailed report as to conditions was made, a copy being sent to the Board of Education, another to the Provincial Board of Health at whose request the inspections were made and a third copy is on file in my office.

Another inspection will be made this winter showing to what extent the recommendations made have been acted upon.

District Inspection.

At the request of Dr. Sparks, Prov. Dist. M.O.H., I accompanied him on a tour of inspection around the East coal dock section, harbour frontage and to several of the dairies.

Convention.

I attended the Annual Convention of the Sanitary Inspectors' Association held this year at Ottawa, at which splendid addresses and papers were heard and discussed.

These conventions are the one opportunity I have of keeping up to date and I trust the Board will grant the same facilities for me to attend the next meeting at Winnipeg in the coming year.

All of which is respectfully submitted,

A. J. Bolus, M.R.S.I.,

Sanitary Inspector.

BIRTHS REGISTERED IN THE CITY OF FORT WILLIAM
for the year ending October 31st, 1921

Month	Total	Males	Females	Twins
1920				
November	54	23	31	2
December	76	37	39	3
1921				
January	43	16	27	
February	52	22	30	1
March	49	25	24	
April	79	34	45	1
May	63	35	28	2
June	54	26	28	
July	60	32	28	
August	47	21	26	
September	63	30	33	2
October	76	36	40	1
Totals	716	337	379	12

STILL BIRTHS

1920			
November	2	1	1
December	2	1	1
1921			
January	2	1	1
February	3	2	1
March	7	5	2
April	2	2	0
May	1	0	1
June	1	1	0
July	0	0	0
August	1	1	0
September	2	1	1
October	3	2	1
Totals	26	17	9

ANALYSIS OF DEATHS UNDER ONE YEAR BY WARDS

		Wards					Non-residents
		Total	1	2	3	4	
151	Congenital Debility, etc.	39	20	6	4	4	5
104	Enteritis and Diarrhoea, etc	12	4			5	3
152	Other Diseases of Early Infancy	6	2	1		3	
91	Broncho-pneumonia	7	5			1	1
89	Acute Bronchitis	3	2	1			
61	Meningitis	3		1	1	1	
8	Whooping Cough	3	2	1			
71	Convulsions of Infants	2	1			1	
6	Measles	2	1			1	
37	Syphilis	1					1
78	Acute Endocarditis	1				1	
109	Hernia, Intestinal Obstruction	1				1	
189	Ill-defined	1				1	
169	Accidental Drowning	1					1
34	Tuberculosis of other Organs	1	1				
20	Septicaemia	1				1	
36	Rickets	1	1				
150	Malformations	1		1			
10	Influenza	1	1				
	Totals	87	40	11	5	20	11

ANALYSIS OF DEATHS UNDER ONE YEAR BY MONTHS
NOVEMBER, 1920—OCTOBER, 1921.

151	Congenital Debility, etc.		6	2	1	5	3	4	5	5	3		5
104	Diarrhoea and Enteritis	1				3			1		5	2	
152	Other Diseases of Early Infancy		1	1	1		1			2			
91	Bronchopneumonia				1	2	1	2					1
89	Acute Bronchitis				2		1						
61	Meningitis	1			1	1							
8	Whooping Cough	1	1				1	1					
71	Convulsions of Infants						1	1					
6	Measles		2										
37	Syphilis				1								
78	Acute Endocarditis										1		
109	Hernia, Intestinal Obstruction											1	
189	Ill-Defined					1							
169	Accidental Drowning									1			
34	Tuberculosis of other Organs						1						
20	Septicaemia											1	
36	Rickets						1						
150	Congenital Malformations										1		
10	Influenza						1						
	Totals	3	10	3	7	12	10	8	6	8	10	4	6

Deaths.

Number on International List.		
151	Congenital Debility, etc.	39
104	Diarrhoea and Enteritis (Under two years)	14
79	Organic Diseases of the Heart	13
92	Lobar Pneumonia	11
91	Bronchopneumonia	10
120	Bright's Disease	9
175	Traumatism by other crushing	8
169	Accidental Drowning	8
28	Tuberculosis of Lungs	8
6	Measles	7
152	Other Diseases peculiar to Early Infancy	6
61	Meningitis	6
81	Diseases of the Arteries	6
185	Fractures	5
41	Cancer of the Peritoneum, Intestines, Rectum, etc.	5
7	Scarlet Fever	5
109	Hernia, Intestinal Obstruction	4
82	Embolism and Thrombosis	4
78	Acute Endocarditis	4
40	Cancer of the Stomach	4
150	Congenital Malformations	3
137	Puerperal Septicaemia	3
89	Acute Bronchitis	3
71	Convulsions of Infants	3
64	Cerebral Hemorrhage	3
50	Diabetes (Diabetes Mellitus)	3
45	Cancer of Other or Unspecified Organs	3
43	Cancer of the Breast	3
42	Cancer of the Female Genital Organs	3
34	Tuberculosis of Other Organs	3
8	Whooping Cough	3
189	Ill-defined	2
181	Electrocuted	2
170	Traumatism by firearms	2
174	Traumatism by machines	2
154	Senility	2
146	Diseases of the Bones	2
132	Salpingitis	2
118	Other Diseases of the digestive system	2
115	Other Diseases of the Liver	2
51	Exophthalmic Goitre	2
30	Tuberculous Meningitis	2
20	Purulent Infection and septicaemia	2
10	Influenza	2
9	Diphtheria	2
173	Traumatism in mines and quarries	1
167	Burns	1
149	Other diseases of the organs of locomotion	1
140	Following childbirth (not otherwise defined)	1
136	Other accidents of labor	1
126	Diseases of the Prostate	1
110	Other Diseases of the Intestines	1
108	Appendicitis	1
100	Diseases of the Pharynx	1
85	Hemorrhage	1
69	Epilepsy	1
66	Paralysis without specified cause	1
63	Other diseases of the spinal cord	1
54	Anemia, chlorosis	1
53	Leukemia	1
48	Chronic Rheumatism	1
37	Syphilis	1
36	Rickets	1
31	Abdominal Tuberculosis	1
19	Paratyphoid Fever	1
1	Typhoid Fever	1
	Total	258

There were thirty-six deaths of non-residents in this municipality. The causes of death were as follows:

151	Congenital Debility, etc.	6
104	Enteritis and Diarrhoea	3
92	Lobar Pneumonia	3
28	Tuberculosis of the Lungs	2
169	Accidental Drowning	2
79	Organic Diseases of the Heart	2
40	Cancer of the Stomach, Liver etc.	2
51	Exophthalmic Goitre	2
132	Salpingitis	2
175	Traumatism by other crushing	1
154	Senility	1
149	Other diseases of the organs of locomotion	1
137	Puerperal Septicaemia	1
120	Bright's Disease	1
109	Hernia, Intestinal Obstruction	1
91	Bronchopneumonia	1
82	Embolism and Thrombosis	1
69	Epilepsy	1
45	Cancer of other or unspecified organs	1
43	Cancer of the Breast	1
9	Diphtheria	1
	Total	36

There were ten deaths occurring in other municipalities which were reported here. The causes of death were as follows:

175	Traumatism by other Crushing	5
150	Congenital Malformations	1
91	Bronchopneumonia	1
81	Diseases of the Arteries	1
37	Syphilis	1
28	Tuberculosis of the Lungs	1
	Total	10

FINANCIAL STATEMENT FOR YEAR ENDING OCTOBER 31ST, 1921.

Salaries of City Hall Staff		7,524.00
Special Clinic Nurse		58.34
Car Fare		92.25
Printing and Stationery		87.45
Antitoxin Syringes		51.15
Conventions		200.00
Phone and Ice		95.00
Office and Laboratory Equipment		3.95
Automobile		134.39
Incidentals		221.86
Abattoir		21.57
Salaries Isolation Hospital Staff		3,528.00
Temporary Employees		1,013.72
Maintenance		3,889.89
		16,921.57
CREDITS.		
Isol. Hosp. Accts. Collected	4,289.01	
Garden Produce	150.00	
Police Court Fines	216.00	
Antitoxin Syringes	11.25	4,666.26
Net Cost of Department		12,255.31
There was also spent on capital account—Abattoir		737.34
Per capita cost—Department		42.268 cents
Per capita cost Isolation Hospital		41.977 cents
Total per capita cost operation of board		84.245 cents

Respectfully submitted,
EDWARD B. OLIVER,
Medical Officer of Health.

GALT.

GALT, Dec., 1921.

To the Members of the Galt Board of Health:—

Gentlemen:—

A record of the work performed by the Local Board of Health for the year 1921 is placed before you in the following report:—

I desire to call your attention to the very complete report of the M.O.H. This detailed report enables the ratepayers to intelligently appreciate the magnitude of the work involved, the duties and the responsibilities attached to his office.

Too often the individual sees only the official, without realizing that the administration of the health laws is a community service, whereby the health and morals of the people are safeguarded. The carrying out of the provisions of the Health Act, necessarily imposed hardships, but the attitude of the Board in the past has been very sympathetic, and the burdens have been made as light as possible.

The Vital Statistics are worthy of an extended comment. It is truly a lamentable fact reported by the M.O.H., that out of the total of 35 deaths under one year, 17 were stillborn. I had hopes that the report in this connection would be more favourable, and I sincerely wish expectant mothers would take advantage of the opportunity to consult the health nurse, and in a large measure remedy this abnormal condition.

The extension of our sewer system has been progressive, the number of connections showing a greater appreciation of this service. A number of property owners have taken advantage of the Act, enabling them to instal modern conveniences with the city's assistance, payment being made over a period of five years.

In my last report I called your attention to the need of garbage disposal, and suggested a conference with the city council, towards securing adequate dumping places. This necessity is becoming increasingly urgent, and must be attended to in the near future.

The need of the New City Hospital has been amply demonstrated during the past year, fifty-six cases having been treated successfully. This is a matter for congratulation, and should reassure parents and reconcile them to the separation entailed. The Health Act imposes a five weeks' quarantine for Scarlet Fever, by placing the child in the City Hospital one week of quarantine is required. Where there are children of school age this is a great advantage.

In this connection it may not be amiss to offer a suggestion relating to the passing of health laws. It seems to me the Local Board of Health should be advised from time to time, of any contemplated change or enactments, and should have some voice in future legislation.

The absence of Typhoid Fever is due no doubt to the purity of the water, the greatest care being taken in securing an abundant supply, free from contamination.

Another factor towards eliminating typhoid germs is the supply of pure milk, which has reached a high standard, producer and vendor co-operating together with the above gratifying results.

In my last report re Public Lavatory, I noted a resolution submitted to the City Council, but I regret to state no action has been taken. The necessity for this service should be further investigated.

During the year an effort was made to place the different health nurses under one management. It was not deemed advisable to press the matter.

In closing this report I wish to convey to you my appreciation for the courtesy and co-operation extended to me during the past year.

Respectfully yours,

J. H. LAIRD,

Chairman, Galt Board of Health.

To the Chairman and Members of the Local Board of Health, of Galt.

Gentlemen:—

In accordance with the provisions of the Ontario Public Health Act, I beg herewith, to submit my annual report, for the year ending October 31st 1921.

Re Typhoid Fever

It affords me great pleasure to report to you that our city again has been free from typhoid fever for the fourth consecutive year, and that the water supply continues to maintain its high standing, being free from any source of contamination excepting a trace of Colon Bacilli which was found a few months ago in the southern part of the collecting gallery. This condition I am happy to state has been overcome by placing a filter of sand and charcoal across that portion of the gallery.

It is also a source of pleasure to inform you, that the milk sold in the city is and has been pasteurized for over one year, thereby eliminating the possibility of the bovine tubercle being transmitted to the children. The milk on the whole has been comparatively clean, with one exception and quite up to the standard of the city's by-law, in butter fat.

Re Infantile Mortality.

During the latter part of last year we established a weekly well baby clinic under the control of the Local Board of Health, with Miss Brighty as community Health Nurse, with a view of reducing the death rate among the children, but I do not expect very great results in such a short time, as it required several months in the early part of the year to get the clinic thoroughly organized and sufficiently advertised. However I am hopeful of good results in the near future notwithstanding the fact that the work has been very much handicapped by not having larger and better quarters to facilitate us in our good work.

About four months ago, a weekly chest clinic was established under Dr. Proctor of the Waterloo County Sanitorium, from which I also expect good results, because it is a well known and conceded fact by all chest specialists, that Tuberculosis is curable if properly diagnosed in the incipient stage.

It is a lamentable fact that I am compelled to report that out of the total number of deaths among children registered in the Galt division, seventeen of which were still-born due in my judgment to the lack of proper education and care of the mother in the pre-natal condition, but Mr. Chairman I am fully convinced that

this condition will be remedied to a very great extent as soon as the community or Health Nurse gets her work thoroughly organized and under control as well as receiving the sympathy and support of the citizens generally to such a worthy cause.

Re Privies.

For two or three months of this year, we have had a great deal of trouble and vexation of spirit, to keep the outside privies in a clean and sanitary condition, on account of the unfortunate appointment of a man totally unfit for the work, but happily I trust that the trouble is over, and we will again be able to report that the work is being done more satisfactorily.

During the year we have had 120 premises connected with the sewer.

Re Public Lavatories.

I regret very much indeed that I have not been able to persuade the City Council to put in Public Lavatories, as they are so badly needed on account of the lack of sufficient accommodation for the public.

Re Venereal Diseases.

Galt, judging from the reports of the medical men has been comparatively free from venereal diseases and if that is a true state of affairs, the city is to be very much congratulated.

Re Communicable Diseases.

It is a very regrettable fact that the number of communicable diseases have been greatly in excess of any year, since I have been Medical Officer of Health, with one exception, and that was the year in which the 122nd Battalion was stationed here.

Re City Hospital.

This building is now completed, furnished, and has during this year treated, and taken care of fifty-four cases of scarlet fever, one of diphtheria and one of measles. It has a cheerful and bright outlook, making it as attractive as you could expect any contagious hospital would be. The expenses connected with this Hospital have been large, but not more than could be expected when you consider that the grounds had to be levelled, put into condition and the building furnished throughout from current expenses.

As shown by the vital statistics report given below:—

The total number of deaths registered for this year, (from November 1st, 1920, to October 31st, 1921) is 163, whilst the number for last year during the same period was 175, being a decrease of 12, but even this favorable report does not do justice to our city, because I find on careful examination of the Hospital reports, that 21 deaths registered in Galt, were non-residents and therefore should be deducted from the total deaths, thereby leaving an actual death rate for the city of 142.

As will also be shown with the increase of the population from 13,092 to 13,332 and the decrease in the number of deaths from 152 to 142 the death rate per thousand has been reduced to 10.65 which rate I am satisfied will compare

favorably with any city in the Province of Ontario, and yet notwithstanding this excellent showing as to the total death rate I find little or no change among children under one year.

VITAL STATISTICS.

Population ..	13,332
Deaths (Residents) ..	142
" (Non-residents) ..	21
" (rate per M. residents	10.65
" (rate per M. non-residents)	1.57
Infant mortality under 1 year	35
" " per M.	2.62
Births ..	360
Rate per M.	27.00

CONTAGIOUS DISEASES.

Reported		Deaths
0	Typhoid fever ..	0
60	Smallpox ..	0
113	Scarlet fever	0
15	Measles ..	0
160	Mumps ..	0
21	Chickenpox ..	0
1	Whooping cough	0
10	Diphtheria ..	0
1	Spinal meningitis	1
5	Tuberculosis ..	4

Respectfully submitted,
J. H. RADFORD,
M.O.H.

HAMILTON.

City of Hamilton, (*Health Department*).

(Report of The Medical Officer of Health for the year Ending October, 31st., 1921.)

To His Worship the Mayor, the Chairman and Members of the Board of Health for the City of Hamilton:

Gentlemen:

I have the honour of submitting my Report for the year ending October 31st., 1921.

The Report as submitted for your consideration, relates to Vital Statistics; particulars of Communicable Diseases, and reports of the Principal Divisions of the Health Department.

The matter of School Inspection—A special survey of artisan dwellings and other subjects relating to health conditions in the city will be touched upon in their appropriate places.

Population.—The estimated population of the City of Hamilton in the month of October was 118,233, as compared with 114,766 for the previous year.

Births.—The number of births excluding prematurity and stillbirths was 3338, showing a birth rate 28.2 per thousand of the population.

A table will be found at the end of this report showing the number of births registered each month.

Deaths.—The number of deaths from all causes and at all ages registered in the city totalled 1472.

From this number however, prematurity and still-births are deducted and give a net total of 1,260 deaths, showing death rate at 10.65 per thousand.

Hamilton is to be congratulated on such a low death rate, as this rate is the lowest for which I can find any record for at least the last eighteen years, as shown in a table at the end of this report.

Infantile Mortality Rate.—The number of deaths amongst infants under the age of one year, exclusive of prematurity and still-births was 259. This is equivalent to an infantile mortality rate of 77.6 per thousand of living births, as compared with 86.3 for the previous year, and may be regarded as satisfactory, when compared with previous years.

The statistics as recorded are an evidence that the health of the city may be viewed with satisfaction.

In the table showing the causes of death amongst children under the age of one year, it will be noticed that out of a corrected total of 259, no less than 110 or forty-two per cent. of the deaths resulted from Malnutrition and Gastro Intestinal Diseases.

These figures exhibit features which demand careful consideration, and would indicate that had the parents of some of these little ones been better informed that at least a considerable percentage of such lives might have been spared.

It is in such cases that the services of nurses trained in Child Welfare, can be of the highest value; such service is available; but on account of the limited number of nurses on our staff, their sphere of usefulness is proportionately curtailed.

The nurses by a faithful discharge of duty, in following up and regulating cases of communicable disease, and administering to the needs of those requiring their services; the Food and Dairy Inspectors, who by a vigilant guard, protect the community against the dangers of unwholesome food, and contaminated or otherwise affected milk supply; the Sanitary Inspectors, by a watchful care, ever on the alert for conditions that may be dangerous or injurious to health, have each contributed their share toward the improvement in our general and infantile death rate.

The Reports from the several Divisions will show the amount of work accomplished during the year; and if they mean anything at all, they surely mean that by the active and preventive measures adopted, not only has the general health of the community been benefitted, but that lives have been saved.

The Chief Medical Adviser of the British Ministry of Health, on one occasion when referring to the suppression of diseases made this statement "No technical device or narrow specific remedy can avail, apart from the sanitary environment of the community, and the sound nutrition of the individual."

It is along this line of thought, and of action, that the activities of all divisions of the Health Department are directed.

COMMUNICABLE DISEASES.

Influenza.

This disease which was so terribly prevalent in 1920, has been, relatively speaking, absent during the year; for only 23 cases have been notified, compared with 4008 in the previous year. All of these cases were reported in the month of February. While it is true that the cause of Influenza has not been determined, nor its specific organism isolated, it is also a fact that the laws controlling its appearance in this place and in that, have not been discovered.

Its comparative absence during the year affords occasion for relief.

Seven deaths were referred to this disease.

Chickenpox.

Cases of Chickenpox outnumbered any other disease notified; there being 798 cases so notified.

No deaths resulted from this disease during the year.

Smallpox.

Smallpox was fairly prevalent during the first half of the year.

The greatest number occurring in any month, was in the month of january, when 48 cases of this disease were notified.

Only 1 case was reported in July, and no other cases have since been notified.

From the fact that no deaths occurred from this disease, it will be understood that the majority of the cases were of a mild type, although 201 notifications of this disease were received.

There is however as great a danger of infection from a mild case of smallpox as would be possible from a more severe case.

Every care was exercised by the Department in preventing the spread of this disease, and notwithstanding the fact that owing to its appearance in serious proportions in several sections of Ontario, we anticipated that a heavy expenditure

might be necessary to bring the disease under control, the vigilance and faithfulness of our staff enabled us to accomplish this with scarcely any disturbance of business and with a comparatively trifling expenditure.

Diphtheria.

Diphtheria has been very insistent throughout the year.

The highest number of notifications received in any month was in October when 111 cases were notified.

In the month of June the least number in any month were received, there being 25 cases notified during the month.

The total number of cases reported during the year amounted to 608.

Of this number 41 cases terminated fatally; affording a percentage mortality of 6.74 of the cases actually reported.

While the number of cases was slightly in excess of the previous year, there being 608 against 596 for 1920, the case mortality was decreased.

It is hoped by a more studious preventive treatment, and curative measures in the early stages of this disease, that the case mortality may be still further reduced.

The great danger in diphtheria is delayed treatment, and neglect of preventive measures to safeguard the well members of a family who have been exposed to infection.

I am anticipating very beneficial results from the proposed establishment of a Toxin-Antitoxin Clinic at the Health Centre in combatting this very dangerous and highly contagious disease.

Scarlet Fever.

Two hundred and forty-five cases of Scarlet Fever have been reported during the year.

The lowest number in any month recorded at the office was in the month of December, with 30 cases.

Three deaths were referred to Scarlet Fever; giving a percentage mortality of 1.22.

This is a low percentage rate, and compares favorably with the particulars for the previous year, when the mortality rate was 2.4 per cent of 493 cases reported.

Typhoid Fever.

Possibly in relation to Typhoid Fever, conditions are more satisfactory than in any other disease.

During the year 21 cases of this disease were notified; 9 of these cases were brought into the city from outside points for hospital treatment, so that only 12 cases occurred amongst Hamilton residents.

Measles.

Three hundred and ten notifications for measles were received during the year, as compared with 1846 for 1920.

Measles could not be described as epidemic at any period during the year, as the cases were distributed over 11 out of the 12 months. Sixty cases were notified in the month of September.

Only one case of measles is reported to have had a fatal termination.

Whooping Cough.

Seven hundred and fifty-eight cases of Whooping Cough were notified, as against 315 for the previous year.

Eighteen deaths resulted from this disease and represent a percentage mortality of 2.36.

Other Diseases.

Other diseases will be referred to, in a table at the end of the report, and will include Mumps, Tuberculosis, and Erysipelas.

Tables of diseases under numerous headings will also be found at the end of the report.

Special Reports.

Many Special Reports have been submitted to the Board of Health, and have been disposed of.

Others are under consideration, and I am preparing still others on subjects relating to Health conditions, which will include the Sanitary Inspection of School premises. This report is nearing completion and will be prepared for the consideration of the Provincial Board of Health, and the Board of Education, as well as for the Board of Health. The question of the Medical Inspection of Schools has been touched upon in a cursory way at various times throughout the year.

A Survey of the artisans dwellings throughout the city has been under way for some time.

This Survey is being undertaken by the District Inspectors as time and occasion permit.

We are now comfortably and commodiously housed in the Public Health Building, formerly the Public Library at 20-22 Main Street West, and our Health Centre establishment is partially in existence.

I desire to express my sincere thanks to His Worship the Mayor, to the Board of Control and Members of the Council who have assisted in any way in bringing this work to a successful development.

In concluding my Report I desire to express my high appreciation for the loyal and generous help afforded me, in my capacity as Medical Officer of Health, and a Member of the Board, by the Chairman, Alderman C. Cooper, Controller Davis and Mr. E. Madden, Members of the Board.

I have the honour to be,

Gentlemen,

Your obedient servant,

James Roberts,
Medical Officer of Health.

HAMILTON GENERAL HOSPITAL,
November 1st, 1921.

To DR. JAMES ROBERTS,
Medical Officer of Health.

Dear Sir: --

In presenting the report of the City Laboratories as to Board of Health Laboratory Examinations, during the year ending October 31st, 1921. I wish to extend my thanks to yourself and to the Board for your co-operation and help. The year has been a somewhat trying one. There has been a substantial increase in the amount of work, and while carrying on this work it has been necessary to undertake the training of two new technicians. Miss Bowman, who had been on the staff for more than two years, resigned in May, and Miss Campbell, who had had no previous experience in Laboratory technique, was appointed in her place. Miss Davis had undertaken her duties one month earlier and she too came to us inexperienced. It was necessary to train these girls as rapidly as possible and at the same time carry on the increasing amount of work. Thanks to the faithful co-operation of Mr. F. J. Elliott, the Chief Technician and of Miss White, in charge of Records and Reports, we have been able to accomplish this end. The two girls are making splendid progress and it is hoped that the Laboratory may be able to retain their services for some time to come.

I have appended a detailed monthly statement of the year's work, a summary for the year, an analysis of the work done for patients in the Hospital and for the city outside of the Hospital, and a table showing comparative figures for the past five years, as taken from the annual reports of the Board of Health. These latter figures show a steady increase in the service which the Laboratory is rendering. For this year the total figures run to over 15,000 examinations, and as the cost to the Board is not over $5,000.00, it can readily be seen that the Laboratory is rendering a service worth many times the amount expended on it.

Since 1917, Venereal diseases have come under the control of Boards of Health. This has meant a great increase in the number of Wassermann Reactions performed and during the last year the numbers have almost doubled. I think it desirable to point out here that in the case of samples submitted for examination for Venereal disease, it would be much better if doctors would send them in under numbers or initials, rather than under full names. Provision is made for this in the Venereal Diseases Act.

The performance of the Widal Reaction for Typhoid Fever, has confirmed the diagnosis of Typhoid in a certain number of cases, but so far as I have been able to discover, all these are cases which have been contracted at points outside the city. As a routine all samples of blood submitted for Widal Reactions have been tested for their agglutinin reaction toward all three enteric organisms, namely, B. Typhosus, B. Paratyphosus A, and B. Paratyphosus B. We have found two cases of Paratyphosus B. To do this it is necessary to have a larger amount of serum, and hence an outfit, somewhat similar to a Wassermann outfit has been devised.

In the examination of Sputa for Tubercle Bacilli, a Concentration method has been adopted, whereby a large quantity of sputum is digested, centrifuged and films made from the sediment. This reduces the risk of missing organisms to a minimum.

In the examination of Diphtheria cultures there has been also an increase. Virulence tests have been carried out in the case of certain carriers. Samples of

milk have been examined throughout the year as to the number and character of their organisms. A start has been made in chemical work, and this will be enlarged upon as rapidly as possible.

During the year there have been a certain number of requests from Doctors in the district for various examinations and reports, and as these did not interfere with the routine they have been complied with. A list of these is appended.

In conclusion, I again wish to thank you and the Board of Health for your co-operation and support during what has been a somewhat trying year and to assure you of a continual effort to improve the Laboratory service.

Yours,

(Signed) Wm. J. Deadman, B.A.
Director.

REPORT OF THE CITY LABORATORIES FOR THE YEAR ENDING OCTOBER 31st, 1921

		Wassermann Reactions				Spirochaete Examinations			Gonococcus Films			Widal Reactions		
		XXX	Weak	–	Total	X	–	Total	X	–	Total	X	–	Total
November	1920	29	16	127	172	0	0	0	13	105	118	3	12	15
December	1920	27	14	122	163	0	1	1	10	97	107	3	8	11
January	1921	40	21	165	226	0	0	0	16	133	149	3	14	17
February	1921	22	17	143	182	0	0	0	11	117	128	0	5	5
March	1921	40	24	181	245	1	0	1	23	120	143	3	8	11
April	1921	45	8	232	285	0	0	0	5	128	133	0	17	17
May	1921	49	5	207	261	0	0	0	5	116	121	0	7	7
June	1921	37	11	196	244	1	0	1	11	128	139	0	5	5
July	1921	35	13	202	250	1	1	1	16	135	151	2	15	17
August	1921	36	12	193	241	0	1	1	26	179	205	8	19	29
September	1921	42	14	221	277	0	1	1	18	155	173	8	38	46
October	1921	38	12	166	216	0	0	0	13	97	110	7	19	26
Total		440	167	2155	2762	2	4	6	156	1510	1677	37	167	204

CITY LABORATORIES REPORT FOR THE YEAR ENDING OCTOBER 31st, 1921

		Stools for Typhoid			Urine for Typhoid		Sputa for T. B.			Diphtheria Cultures				Milk	Water
		X		Total	X	Total	X		Total	D X	R X		Total	Total	Total
November	1920	1	17	18	0	12	2	37	39	92	0	667	759	10	24
December	1920	0	7	7	0	6	7	70	77	96	0	681	777	0	6
January	1921	0	8	8	0	8	12	72	84	88	74	941	1103	0	29
February	1921	0	0	0	0	0	7	102	109	51	17	743	802	10	24
March	1921	0	0	0	0	0	6	90	96	42	28	672	742	21	12
April	1921	0	2	2	0	3	6	88	94	52	41	660	753	10	22
May	1921	0	0	0	0	0	7	70	77	59	66	840	965	18	17
June	1921	0	0	0	0	0	9	84	93	34	28	653	715	25	32
July	1921	1	0	1	0	0	7	59	67	45	48	435	528	18	33
August	1921	1	2	3	0	1	5	69	74	30	12	472	514	28	33
September	1921	0	6	6	0	4	5	59	64	53	16	517	586	24	34
October	1921	0	8	8	0	9	1	55	56	145	117	1139	1401	27	27
Total		3	50	53	0	43	75	855	930	787	447	8411	9645	191	293

D—Diagnosis. R—Release.

SUMMARY FOR YEAR ENDING OCTOBER 31st, 1921.

		Specimens from Hospital	Specimens from City	Total
Wassermann Reactions		1,573	1,189	2,762
Strongly Positive	440			
Weakly Positive	167			
Negative	2,155			
Spirochaete Examinations		5	1	6
Positive	2			
Negative	4			
Gonococcus		1,271	406	1,677
Positive	167			
Negative	1,510			
Widal Reactions		99	105	204
Positive	37			
Negative	167			
Stools for Typhoid		49	4	53
Positive	3			
Negative	50			
Urine for Typhoid		35	8	43
Positive	0			
Negative	43			
Sputum for T. B.		445	485	930
Positive	75			
Negative	855			
Diphtheria Cultures		4,615	5,030	9,654
Positive(Diagnosis)	787			
Positive (Release)	447			
Negative	8,411			
Milk Examinations		0	191	191
Water Examinations		0	293	293
Total Examinations		8,092	7,172	15,804

BOARD OF HEALTH LABORATORY WORK
COMPARATIVE TABLE FOR FIVE YEARS

	1916–1917	1917–1918	1918–1919	1919–1920	1920–1921
Wassermann Reactions	0	814	1,037	1,599	2,762
Spirochaete Examinations	0	0	10	15	6
Gonococcus Films	0	795	825	1,099	1,677
Widals	148	148	85	194	204
Stools for Typhoid	0	0	0	20	53
Urines for Typhoid	0	0	0	21	43
Sputums	481	501	723	659	930
Diphtheria Cultures	4,476	2,069	4,849	8,261	9,645
Milks	0	0	12	147	191
Waters	300	300	320	320	293
Total	5,405	4,627	7,861	12,335	15,804

BOARD OF HEALTH WORK DONE DURING PERIOD 1-11-20 to 30-9-21
FOR PLACES OUTSIDE HAMILTON.

Place	Wasserman Reactions	C. C. Films	Widals	Sputa	Diphtheria Cultures	Water	Total
Ancaster	0	0	1	1	0	4	6
Aldershot	0	0	0	2	1	0	3
Bartonville	3	1	3	0	0	0	7
	0	0	1	1	0	4	6
Burlington	5	1	0	2	2	0	8
Binbrook	3	0	0	0	0	0	3
Brantford	1	0	0	0	0	0	1
Barton Township	0	0	0	1	6	1	8
Beamsville	1	0	0	4	0	1	6
Bronte	0	0	0	0	1	1	2
Cayuga	8	0	4	1	0	0	13
Caledonia	2	1	1	2	0	1	7
Canfield	3	0	0	0	0	0	3
Dundas	3	1	3	3	5	1	16
Dunnville	2	0	0	1	0	0	3
Delhi	1	0	0	0	0	0	1
Fenwick	1	0	0	0	10	0	11
Flamboro Centre	1	0	0	0	0	0	1
Freeman	0	0	0	0	1	0	1
Grimsby	6	1	1	2	4	0	14
Galt	0	2	0	0	0	0	2
Greenville	0	0	1	0	0	0	1
Jerseyville	0	0	0	1	0	0	1
Hagersville	2	0	0	0	0	0	2
Jordan	1	0	0	0	0	0	1
Jarvis	4	0	0	0	0	0	4
Preston	0	1	0	1	5	0	7
Palermo	1	0	0	0	0	0	1
Sheffield	0	1	0	0	0	0	1
Stoney Creek	3	0	0	0	11	0	14
Smithville	4	0	0	0	0	0	4
Thorold	1	0	0	0	0	0	1
Vinemount	0	0	0	2	0	0	2
Waterdown	3	0	0	0	0	0	3
Welland	2	0	0	0	0	0	2
Winona	2	0	0	0	1	0	3
Wingham	1	0	0	0	0	0	1
Total	64	9	14	23	45	9	164

SHOWING DEATHS FROM COMMUNICABLE DISEASES

From November 1st, 1920 to October 31st, 1921

Diseases	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Tot.
Diphtheria	4	4	4	2	4	3	1	1	1	3	4	10	41
Typhoid Fever			1			1					1		3
Scarlet Fever		1					1					1	3
Whooping Cough	2	3	2	3	4	3					1		18
Erysipelas		1	1	1			1			2			6
Influenza	3	1		1	1	1							7
Consumption	4	4	4	7	7	3	6	4	6	3	5	1	54
Tuberculosis (other forms)	1	2	2	4		2	1	1	2		1	1	17
Measles								1					1
Sleeping Sickness							1						1
Cerebro Spinal Meningitis	1												1
Total	15	16	14	18	16	13	11	7	9	8	12	13	152

SUMMARY OF COMMUNICABLE DISEASES

Reported from November 1st, 1920 to October 31st, 1921

Diseases	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Total
Diphtheria	66	68	75	44	41	52	34	25	26	26	40	111	608
Scarlet Fever	23	38	27	28	24	20	13	12	3	9	15	33	245
Typhoid Fever	7	1	1		2	1				3	5	1	21 X
Tuberculosis	8	7	17	17	15	18	9	25	8	20	13	15	172
Chicken Pox	145	114	163	98	68	55	43	74	15	1	11	11	798
Measles	42	27	41	11	10	45	60	43	20	6		5	310
Mumps	9	1	10	8	16	25	19	6	2	1			97
Erysipelas	1	1	2	1		3	2	1	1	1			13
Smallpox	23	18	48	29	39	27	11	5	1				201
Jaundice (Infectious)		3											3
Whooping Cough	129	152	174	97	55	33	24	25	25	19	22	3	758
Cerebro Spinal Meningitis	1										1		2
Influenza				23									23
Total	454	430	558	356	270	279	215	216	101	86	107	179	3,251

X Includes 9 Typhoid Fever cases infected outside of the city.

POSITIVE KLEBS LOEFFLER

	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Total
		2	8	6	4		16	4	2	1	1	34	78

SHOWING DEATHS FROM COMMUNICABLE DISEASES

From November 1st, 1919, to October 31st, 1920.

Diseases	Nov	Dec.	Jan.	Feb.	Mar	Apr.	May	Jun.	July	Aug.	Sept	Oct.	Total
Diphtheria	4	6	4	1	7	3	3	3	4	4	2	3	44
Typhoid Fever	1	0	1			1	1			1		4	9
Scarlet Fever	1		2	2	1	1		1	2		1		11
Whooping Cough						2	3		3		2	1	11
Erysipelas			1									1	2
Influenza				76	38	3	2		1				120
Consumption	2	5	5	5	6	6	1	7	2	2	2	1	44
Tuberculosis (other forms)	1	2	2	1			2			1		1	10
Measles						3	3	2	1		1		10
Sleeping Sickness		1										1	2
Anterior Polio-myelitis				2							1		3
La Grippe				5									5
Total	9	14	15	92	52	19	15	13	13	8	9	12	271

SUMMARY OF COMMUNICABLE DISEASES

Reported from November 1st, 1919, to October 31st, 1920.

Diseases	Nov	Dec.	Jan.	Feby.	Mar	Apr.	May	Jun.	July	Aug.	Sept	Oct.	Total
Chickenpox	62	41		32	12	11	17	20	8	3	6	83	295
Diphtheria	77	72	70	36	38	44	62	37	19	40	50	51	596
Scarlet Fever	37	56	103	68	75	38	40	21	13	9	9	30	493
Typhoid Fever		4	1		1	2	1		3	6	27	20	65 X
Tuberculosis	9	7	7	8	14	13	18	15	18	8	15	20	152
Measles	2	3	14	14	50	216	383	729	327	68	40		1,846
Mumps	24	84	247	307	296	138	118	45	7	3	7	7	1,283
Erysipelas		2	1	3	3	1	1	2		1		1	15
Smallpox	4	20	15	14	10	4	2	5		2	4	11	91
Whooping Cough	8	5	16	11	16	21	27	22	28	19	57	85	315
Influenza	7	2	413	505	451	1			1				4,008
Cerebro Spinal Meningitis						1				2			3
Poliomyelitis	1										1		2
Sleeping Sickness		1							1				2
Total	231	291	515	3,998	966	490	689	896	425	161	216	308	9,166

X Included 41 Typhoid Fever cases infected outside of the city.

Comparative Table.

Showing causes of death in children under 1 year, exclusive of prematurity and still births.

Malnutrition	51.
Gastro Intestinal Diseases	59.
Nephritis	1.
Malformations	24.
Meningitis	1.
Strangulated Hernia	1.
Cerebro-Spinal Meningitis	1.
Erysipelas	1.
Tuberculosis	2.
Diphtheria	1.
Whooping Cough	11.

Pneumonia & Bronchitis	57.
Tubercular Meninges	2.
Asthenia	6.
Jaundice	1.
Rickets	1.
Myocarditis	1.
Haemophilia	8.
Asphyxia Neonatorum	3.
Tetany	2.
Atelectasis	7.
Injury at birth	9.
Abscess	1.
Otitis Media	1.
Intussesception	1.
Suffocation	1.
Haemorrhage	1.
Uraemia neonatorum	1.
Burns.	1.
Cause not known	2.
	259.

VITAL STATISTICS.

	1920		1921	
	Births	Deaths	Births	Deaths.
November	251	109	250	111.
December	291	142	295	129.
January	301	121	335	138.
February	315	233	308	125.
March	275	220	320	156.
April	317	133	288	128.
May	313	149	314	99.
June	309	128	307	114.
July	275	141	275	129.
August	274	119	285	119.
September	246	126	276	104.
October	240	123	297	120.
	3,407	1,744	3,550	1,472

COMPARATIVE TABLE.

	1920	1921.
Under 1 year	496	471.
From 1 to 5 years	106	84.
From 5 to 10 years	70	42.
From 10 to 20 years	62	49.
From 20 to 30 years	99	74.
From 30 to 04 years	122	87.
From 40 to 50 years	124	114.
From 50 to 60 years	173	121.
From 60 to 70 years	197	163.
From 70 to 80 years	180	155.
From 80 to 90 years	93	96.
From 90 to 100 years	21	16.
Ages not given	1	
	1,744	1,472.

DEATHS.

I. GENERAL DISEASES.

Influenza	7.
Measles	1.
Typhoid Fever	3.

Whooping Cough	18.
Scarlet Fever	3.
Diphtheria	41.
Erysipelas	6.
Tetanus	3.
Sleeping Sickness	1.
	83

TUBERCULOSIS:—

Lungs	54.
Meninges	10.
Intestines	1.
Pertitoneum	2.
Spine	1.
Kidney	3.
	71

CARCINOMA:—

Stomach & Liver	28.
Intestines	5.
Breast	7.
Uterus	10.
Neck	5.
Jaw	1.
Bladder	6.
Rectum	4.
Throat	3.
Ovary	1.
Pancreas	1.
Spine	1.
Not specified	6.
	78

SARCOMA:—

Thoracic Cavity	1.
Intestines	2.
Abdominal	1.
Brain	2.
Ovary	1.
Spine	1.
Not Specified	1.
	9

Rheumatism	3.
Toxemia	2,
Septicaemia	10.
Exophthalmic Goitre	6.
Alcoholism	2.
Pyaemia	1.
Anaemia Pernicious	9.
Anaemia	3.
Diabetes Mellitus	17.
Syphilis	1.
Rheumatoid Arthritis	2.
Hodgkin's Disease	2.
Purpura Haemorrhagica	1.
Cellulitis	1.
Abscess of Neck	2.
	62.

II. Diseases of the Nervous System.

Cerebro Spinal Meningitis	1.
Meningitis	3.
Cerebral Haemorrhage	29.
Cerebral Embolism	2.
Cerebral Tumor	2.
Paralysis (General)	4.
Paralysis (Agitans)	2.
Disseminated Sclerosis	1.
Epilepsy	1.
Convulsions (Not Specified)	1.
Cerebral Abscess	1.
Apoplexy	27.
Hemiplegia	3.
Encephalitis	1.
	78.

III. Diseases of the Circulatory System.

Aneurism	2.
Endocarditis	21.
Cardiac Insufficiency	2.
Chronic Valvular Disease,	15.
Angina Pectoris	5.
Arterio Sclerosis	46.
Myocarditis	60.
Heat Failure	23.
Varicose Ulcer	23.
Mitral Regurgitation	10.
Fatty Degeneration	2.
Acute Dilatation	4.
Mitral Insufficiency	2.
Thrombosis	2.
Heart Failure	16.
Asthenia,	1.
Haemorrhage (Not Specified)	2.
	214

IV. Diseases of the Respiratory System.

Bronchitis	18.
Broncho Pneumonia	54.
Lobar Pneumonia	36.
Hypostatic Pneumonia	1.
Pleuro Pneumonia	4.
Pneumonia	80.
Empyema	2.
Asthma	3.
Pulmonary Abscess	3.
Toxemia	2.
Pleurisy	2.
	205

V. Diseases of the Digestive System.

Duodenal Ulcer	4.
Appendicitis	9.
Peritonitis	6.
Strangulated Hernia	1.
Cirrhosis of the liver	5.
Intestinal Obstruction	11.
Ileo Colitis	2
Gastritis	2.
Gastro Enteritis	3
Gastric Ulcer	2.
Cholecystitis	2.
Enteritis	1.
Colitis	1.
Convulsions (Not Specified)	1.
	50

VI. Diseases of the Genito-Urinary System.

Nephritis	45.
Bright's Disease	9.
Uremia	5.
Salpingitis	2.
Uterine Fibroid	2.
Cystitis	3.
Prostatic Hypertrophy	3.
Albuminurea	1.
	70

VII. Diseases of Puerperal State.

Eclampsia	1.
Abortion	2.
Septicaemia (Childbirth)	4.
Childbirth	2.
Post Partem Haemorrhage	1.
Caesarean Section	1.
	11.

VIII. Diseases of the Skin.

Gangrene (Foot)	4.
	4

IX. Diseases of the Bones.

Mastoiditis	3.
Rickets	2.
	5

X. Malformations.

Congenital Heart	2.
Spina Bifida	8.
Hydrocephalus	1.
Malformations	2.
	13

XI. Diseases of Early Infancy.

Malnutrition	53.
Gastro Intestinal Diseases	67.
Intussusception	1.
Status Lymphaticus	1.
Congenital Debility	8.
Patent Foramen Ovale	5.
Strangulated Hernia	1.
Asthenia	6.
Atelectasis	7.
Still Births	168.
Premature	44.
Injury at Birth	9.
Jaundice	1.
Otitis Media	1.
Abscess	1.
Meningitis	2.
Myocarditis	1.
Uraemia Neonatorum	1.
Haemophilia	8.
Asphyxia Neonatorum	3.
	388

XII. Diseases of Old Age.

Old Age	27.
Senile Decay	22.
Adyamic causes	1.
Senile Dementia	3.
	53

XIII. External Causes.

Accidental injuries:—Falls, Burns, Poisoning	28.
Murder	4.
Drowning	4.
Suicide	12.
Fractures	5.
Hanging	1.
Killed:—Train, auto, street car, etc.	11.
Suffocation	1.
Post Operative	5.
	71

XIV. Ill-Defined Causes.

Heat Prostration	3.
Cause not known	3.
Cause not given	1.
	7

Report of Visiting Nurse Dealing With Tuberculosis.

James Roberts, Esq. M.D.
Medical Officer of Health.

Sir:

Below please find report from the down town dispensary of the Sanatorium. for the year ending September 30th, 1921.

During the past year no change has been made in the method of carrying on this most important branch of an Anti-tuberculosis Dispensary. Three clinics have been held each week—Monday, Wednesday and Friday afternoons, where patients suffering from any form of chest disease can be examined free of charge. Patients unable to afford a physician have been given an outline of treatment, medicine and supplies, as the case required.

Twelve hundred and seventy-four patients were examined at this clinic; of this number 595 were new cases; 679 re-examinations were made; 221 patients came for medicine and advice. 598 supplies of paper handkerchiefs, sputum and educational pamphlets have been given to patients under treatment in their own homes.

The visiting nurse made 1690 calls during the year, of these 1127 were return calls to patients under observation or supervision. 417 were to new homes and 146 were miscellaneous calls.

During this year the co-operation of those having public health and public welfare at heart, has been very encouraging but more than this has been the encouragement from the co-operation of those visited, without which almost nothing can be done along preventive lines.

It is in the home where the work of the visiting nurse is most important. Tuberculosis is a preventable disease and curable in practically every case, where treatment can be undertaken in the incipient stage; even patients moderately advanced may be cured if treatment and advice are followed conscientiously.

A visiting nurse with sympathy and understanding is able to impart useful knowledge possessed by her, to those who need it most. An ever present watchfulness, caution, cleanliness, sunshine, fresh air and cheerfulness to those who are sick and to those who are well; proper feeding of children, proper rest and work, with advised recreation for growing boys and girls, are essential factors in a successful combat with this disease. The necessity for instruction along these lines, is evident in many homes of the city at the present time.

Two hundred and forty two children were examined at our dispensary during the year; 59 of these were found to be affected with active pulmonary tuberculosis; 52 were incipient cases; 6 moderately advanced and one was a far advanced case. Of the remaining 183 many were found to be suffering from malnutrition. Practically all were below par physically, and in any case where a visit to the home revealed the lack of nourishment, as the underlying cause, the Junior Health League have supplied from 1 to 2 quarts of milk daily; and it has been interesting to note gain in weight and general improvement in a surprisingly short period of time.

Ninety-five dollars have been withdrawn from the Miss Juliette Doolittle fund, to supply eggs and fruit to these children; and a few delicacies for patients confined to their beds.

From the 1274 examinations made, 151 persons were found to be affected with active pulmonary tuberculosis; incipient cases, male 12 and female 13, children 52. Moderately advanced, male 20, female 16 and children 6. Far advanced, male 25, female 16 and children 1.

One hundred and thirteen patients were recommended for sanatorium treatment, 172 are suspected cases and have been kept under observation.

Owing to the lack of accommodation at the sanatorium there has been a waiting list of men, women and children throughout the year.

Sources of reference to the Dispensary have been as follows:—

Physicians,	237.
School nurses,	61.
Self or friends,	290.

Patients with positive sputum reported from the City Laboratory totalled 86. Expenditure for the upkeep of the dispensary amounted to $29.87. Money obtained from the sale of thermometers and medicine, $36.00; cash in box, $9.78.

Balance from 1920, $1.762, leaving a balance on hand of $34.03.

Respectfully submitted.

REPORT OF THE DENTAL CLINICS.

To: JAMES ROBERTS, ESQ. M.D.
Medical Officer of Health.

Sir:—

The Annual Dental Inspection of the Public Schools of Hamilton, recently completed shows a great improvement in the condition of children's teeth, which must indeed be gratifying not only to those in charge of the actual treatment of the children but to the Board of Health who have fostered this movement, for the benefit of our future citizens.

Too much stress cannot be laid on the importance of the work, and the public is realizing more and more, the great asset of clean and healthy mouths not only from the health standpoint but from the viewpoint of comfort and decency for the individual as well.

During the past year we have had 2,810 children treated in the two Dental clinics, apart from the examination of the 18,000 pupils attending the public schools. A detailed report of the dental defects of every child has been sent to the parents, and if treatment is desired at the Board of Health Clinics, the parent's signed request is all that is necessary for the child to gain access to the Clinics.

At the present time the request cards have not been returned from all the schools, so that for the present survey an approximate estimate only of the number of children awaiting treatment can be given. This is put at four thousand and if the survey were followed up in the homes this number would be materially increased.

The initial inspection made in 1919, showed over ninety per cent. of the pupils with defective teeth. The 1921 inspection shows less than seventy-five per cent of children's dentition needing attention. While there is still much neglect this is a vast improvement.

The opening recently of a third Clinic in the new Health Centre will help matters greatly, and reach many cases it has been impossible to care for at the Clinics in the King George and Caroline Schools.

REPORT OF THE DIVISION OF SANITARY INSPECTION FOR THE YEAR ENDING OCTOBER 31, 1921.

JAMES ROBERTS, ESQ. M.D.
Medical Officer of Health.

Sir:—

I have the honour of submitting the following Report in connection with the work accomplished by the Division of Sanitary Inspection of the Health Department of the City of Hamilton for the year ending October 31, 1921.

The work accomplished by this Division is tabulated under the following headings:—

Complaints.

Complaints received at the office and attended to 1912.

Notices.

Statutory Notices Served	2608	
Verbal, or Informal Notices	3185	
Total number of Notices	——	5793

Premises Inspected.

The various premises inspected during the year are classified as follows:—

Dwelling houses	7873
Tenements and Apartments	1121
Hotels, Lodging, Boarding and Rooming houses	925
Work-shops, Factories and Offices	522
Restaurants and Stores	655
Stables	601
Laundries	529
Second hand stores and junk yards	251
Yards, Sheds, Areas, Out Buildings and Alleyways	8106
Vacant lots	402
School and Public Buildings	241
Miscellaneous Premises	1001
Inspections of Premises by District Sanitary Inspectors, after notification of cases of Communicable Diseases	12020
No. of Inspections	34247
No. of Re-Inspections	5913
Total of Inspections and Re-Inspections	40160

Nuisances or Sanitary defects removed or abated.

During the process of inspecting the above premises, various nuisances or sanitary defects, more or less prejudicial to health were discovered; these have practically all been removed or abated during the year.

In some instances the works required had not been completed at the close of the year; but as a few of such or similar cases had been left over from the preceding year, and completed during the year, to which this Report relates, there is practically no difference in the net total.

For the purpose of tabulation and comparison, particulars relating to Plumbing are recorded apart from other Sanitary defects.

Plumbing defects, or lack of adequate plumbing discovered and remedied during the year:—

Defective or Choked Drains	514
Choked or defective wash basins and urinals	333
Defective Soil-pipes, water closets, waste pipes and other Sanitary fittings	601
Insufficient ventilation	183
Frozen plumbing	25
Defective, or lack of eavetroughs and rain water leaders	753
Insufficient or improper plumbing fixtures	266
New plumbing installed, in premises, invariably involving the removal of privies or earth closets	649
Total of plumbing defects discovered and remedied	3,186

Sanitary defects, (other than plumbing) discovered and remedied:—

Dirty yards, Courts, Sheds, Areas and Alleyways	3369
Dirty walls, ceilings and surroundings of dwellings	2188
Inadequate natural light for premises	84
Insufficient ventilation	183
Keeping animals in or too near dwellings	542
Lack of proper receptacles for manure, garbage or trade waste	968
Accumulations of manure or other refuse	956
Defective and Insanitary cellars or basements	558
Dilapidated and generally insanitary dwellings or other premises	82
Insanitary conditions in Factories, Workshops or offices	135
Insanitary conditions in Halls and Theatres	43
Insanitary conditions in Schools or Public buildings	17
Overcrowding	76
Defective chimneys	161
Defective roofs	528
Defective gas stoves and fittings	113
Defective furnaces or stoves	75
Earth closets or privies	2074
Miscellaneous defects	975
Total	13127
Plumbing defects brought forth	3186
Total of all defects remedied	16313
Cases reported for prosecution	5

Drain testing. The following particulars relate to the testing of drains:—

Positive results	30
Negative results	11
Total number of drains tested	41
Positive percentage	73.2

Smoke Nuisances:—

Particulars relating to smoke nuisances are recorded in a Special Report on this Subject.

Special reference to the work accomplished by the Division of Sanitary Inspection is made by the Medical Officer of Health.

I have the honour to be,
Sir,
Your obedient servant,

W. F. THORNLEY.
Chief Sanitary Inspector.

Summary of work done by the Inspectors in Quarantine and Isolation:

Houses placarded owing to presence of scarlet fever	92
" " " " " " diphtheria	176
" " " " " " measles	249
" " " " " " smallpox	109
Houses renovated after diphtheria; patient sent to C. H.	285
" " " scarlet fever, patient sent to C. H.	104
" " " tuberculosis, patient sent to Sanitorium	49
" " " smallpox, patient sent to Isolation Hospital	11
Miscellaneous renovations	23
Clothing renovated after smallpox	32
Houses renovated after diphtheria cards removed	169
" " " scarlet fever cards removed	94
" " " smallpox cards removed	114
Measles cards removed	256
No. of visits in connection with smallpox contacts	1329
No. of visits in connection with quarantine and isolation	1403
No. of investigations of cases where persons were bitten by dogs	17

Report on Smoke Nuisances, Their Abatement and Prevention, for the Year Ending October 31, 1921.

James Roberts, Esq. M.D.
Medical Officer of Health.

Sir:

I have the honour of presenting my Report on Smoke Nuisances in the City of Hamilton, and particulars relating to the abatement or prevention of such nuisances, together with other information and direction appertaining to the abatement of smoke nuisances during the year ending October 31st, 1921.

The following is a record of the action taken with this end in view, during the year:—

No. of observations taken of chimneys and smoke-stacks	403
No. of inspections made of power-plants, boiler rooms, boiler equipment, fuel supply, including visits for testing smoke preventing apparatus..	474
Total of obversations and inspections	877
No. of Statutory or Informal Notices served	233

In cases where Notice has been served, the nuisance has either been abated or improvement effected, with few exceptions.

In the report for the four months ending October 31st, 1920, it was recorded that development had been effected at 29 premises: this number has been augmented by more than double during the year to which this report relates.

The following represents the principles which have been acted upon to effect the purpose in view:

(1) Pulverized fuel:

The results obtained being eminently satisfactory where this principle has been adopted. Coal being passed through a pulverizer, from which it is sprayed over an incandescent surface; this ensures the temperature of the fuel being instantaneously raised to the ignition point, so effecting chemical combination and immediate distillation of the volatile gases from the fuel.

(2) Mechanical Stokers.
(a) Sprinkled feed.
(b) Underfeed.

By the Sprinkler method, the fuel is fed into hoppers from which, by a mechanical action the fuel after being crushed to the correct size is sprinkled over the live or incandescent surface of the fire.

The Underfeed method may be briefly described as follows:

The fuel bed consists practically of three separate layers.

The bottom layer is forced up from below.

The centre layer is the coal, in what is known, as the coking stage, and forms the carbonaceous portion of the coal; the hydro carbons having passed through the upper layer. The upper layer forms the incandescent fire bed.

The same formation is maintained throughout, each layer passing into the various stages as the green or fresh fuel is forced from beneath.

Air is forced through the tuyeres in the centre layer, and escapes through the incandescent mass composing the top layer, and instantly combines with the gases released in distillation, and forms the heat constituents in the fire zone, and results in as near perfect combustion as is possible, for the air combines with the liberated gases at the correct point, and in proper proportions.

By the Underfeed method, waste of fuel is reduced to a minimum; for the fuel and air supply being under automatic control, and governed by the steam pressure, not more than the requisite amount of coal is introduced into the furnace, than is necessary to maintain the required pressure,and the correct supply of air to ensure complete combustion.

It is to be hoped that the underfeed principle of automatic stoker will be more widely adopted during the ensuing year than obtains at present.

(3) It is gratifying to note that a large number, of top feed, sprinkler, chain grates and other forms of mechanical stokers are now in operation in the city.

(4) Another type of smoke preventing equipment installed during the year, is the alteration of the furnace, and high power fans provided for forced draught.

By this system it is possible to use a mixture of bituminous slack, and hard coal screenings of buck-wheat size of anthracite coal. The success of this principle as a smoke preventer, has proved more or less precarious.

When the correct proportion of the different grades of fuel is maintained, excellent results have been attained, and positively no objectionable smoke evolved. Insufficient care on the part of the fireman in establishing correct proportions, invariably results in objectionable emissions from the chimney, and a subsequent visit to the boiler room from the Inspector.

(5) A large number of boilers have been equipped with other more or less efficient smoke-preventing devices: such as steam jets, hollow brick arches, fire clay cavity bricks, or a combination of these devices.

The efficiency of such equipment depends on the amount of care exercised by the firemen in the adjustment of same; even when the steam control is regulated by a dash-pot device, owing to neglect in some small detail by the firemen, smoke has been in evidence from what should be, if proper care had been exercised, a smokeless chimney.

(6) For heating plants however, particularly where low pressure boilers are in use, it has not been considered necessary to provide smoke-preventing equipment for such boilers.

At least 95 per cent. of the smoke evolved in the city is occasioned by the use of bituminous or soft coal; all of which is imported from the United States.

In all of such cases, where improvement has been effected, such improvement has been the result of substituting semi-bituminous or some kind of non-smoke-evolving coal for the bituminous article.

(7) In some premises, particularly in several public buildings, down draught furnaces have been provided.

Some of these are adapted for the use of bituminous coal; if great care in firing be exercised, it is possible for this coal to be used without a smoke nuisance being occasioned.

(8) Fuel oil is also being used in at least three factories in this city.

It is hoped that when a supply of fuel oil can be positively assured in the city, that more general use will be made of the same for heating and blast purposes.

While great improvements in smoke conditions in the city have been made during the past year, there still remains much to be accomplished in smoke abatement, before conditions may be described as satisfactory.

Very slight if any opposition has been encountered in dealing with these conditions; it has been the general experience of the Department to find owners of premises where smoke nuisances have been in evidence, anxious to co-operate with the Department in making the City of Hamilton a smokeless city.

The Chamber of Commerce has gone on record along these lines, by appointing a Committee to keep in touch with the Health Department, and render all possible assistance with this end in view.

The Railway Companies, whose locomotives operate in and pass through the city, are still making progress in smoke prevention.

The improvement however is by no means as pronounced as could be desired.

The Department will continue to deal with these Companies until satisfactory results are obtained.

It is worthy of note that in obtaining the results above recorded, no magisterial proceedings have been instituted during the year.

It is hoped that such action may still be avoided.

There are however isolated cases where considerable indifference to authority has been evidenced, and it might be found necessary to deal with these cases through the Courts before the desired results are obtained.

In many instances large sums of money have been spent in providing smoke-preventing equipment.

Not a single case has been reported to the Department, where any regret has been expressed for such outlay.

On the contrary, expressions of gratification have been heard on account of the satisfactory results obtained by practically any means that had been adopted for smoke prevention.

One proprietor of a large business concern, stated that in addition to other satisfactory conditions resulting, a saving of at least one third in his coal bill had been effected; such experiences constitute an evidence that no hardship is occasioned to any person when required to abate a smoke nuisance.

It is hoped that during the ensuing year, in all premises where bituminous coal is still being used, the owners of the same will either suitably equip the boilers with smoke-preventing apparatus, or discontinue the use of such coal in favour of a non-smoke-evolving fuel.

Complaint has frequently been made by owners of such premises, that their fuel contractor has been unable to supply a good Semi-bituminous coal.

Coal Merchants throughout the city will be well advised to see that their yards are well stocked with such fuel in future.

Bituminous coal for the future, will only be suitable for boilers properly equipped for the use of same.

I have the honour to be,
Sir,
Your obedient servant.

W. F. THORNLEY,
Chief Sanitary Inspector,
Smoke Inspector.

DIVISION OF FOOD INSPECTION.

To: James Roberts, Esq. M.D.
Medical Officer of Health.

Sir:—

I submit for your consideration the report on Food and Dairy Inspection for the year ending October 31st, 1921, as follows;

During the year just past I attended, together with yourself, several meetings of the Board of Control in order to emphasize the necessity of passing the Pasteurization By-Law which has on different occasions been recommended by the Local Board of Health, to the City Council.

At the present time something over thirty thousand quarts of milk, varying somewhat throughout the year, are sold in Hamilton. Of this quantity only about 175 gallons are unpasteurized so that we have really accomplished by ten years of education what otherwise would have required statutory enforcement. However we hope during the coming year to have our contemplated by-law adopted by the Council in order that necessary supervision over pasteurizing plants and their equipment may be strictly maintained and the process of pasteurization carried out in a thoroughly scientific manner.

Some attempt has been made rather insistently throughout the year to alter existing regulations, with reference to the shortage of milk in shops and stores.

We feel satisfied that in the interest of the consumer these regulations from a sanitary standpoint are necessary and are being enforced in a reasonable way. We view therefore with satisfaction the decision of the City Council to maintain an attitude of non interference with existing milk legislation.

Following is a summary of inspections made and notices served by my department:—

TOTAL NUMBER OF INSPECTIONS	7,891
Inspections of Central Market	234
" " butcher shops	251
" " abattoirs	13
" " fruit and vegetable stores	432
" " butter and egg stores	10
" " grocery stores	131
" " ice cream premises	148
" " candy kitchens	56
" " bottling works	33
" " restaurants and lunch rooms	823
" " fish stores	24
" " bake shops	194
" " food storage warehouses	6
" " poultry stores	11
" " cattle being slaughtered	3
" " sausage factories	3
" " city dairies	540
" " milk depots	562
" " milk wagons	167
" " dairy farms	1,679
" for licenses—milk, butcher, restaurant, etc.	441
No. licenses refused (various)	60
" milk samples tested (chemicals)	1,494
" milk samples tested (bacterial)	190
" milk temperature taken	872
" cream samples tested	21
" sediment tests made of milk	1,123

" times weighing market products	64
" complaints re food investigated	25
" summons issued	6
" attendance at police court	5
" miscellaneous inspections in connection with various communicable diseases	2,500

NOTICES WERE SERVED AS FOLLOWS:—

Notices to clean premises where food is sold or stored	515
" " " milk wagons	10
" " " milk depots	19
" " " milk dairies	94
" " " dairy cows	58
" " limewash cow stables	150
" " build milk houses	57
" " take out milk licenses	62
" " remove animals from stable	66
" " remove manure from stable	7
" " screen food premises	33
" " provide proper ice box for milk	23
" " abolish roller towels from restaurants	4
" " provide individual sanitary butter tasters	23
" " cover and protect food-stuff	179
" " re light weight foods	5
" " marking fruit baskets	23
" " high bacterial count of milk	12
" " high temperature of milk	161
" " low chemical test of milk	53
" " sediment in milk	56
" " cancelling milk licenses	5
" " refusal of dairy farm license	4

SEIZURES:—

No. lbs beef	2,050
" " pork	240
" " chickens	36
" baskets fruit	16
" potatoes in storage (carload)	2

I have the honour to be,

Your obedient servant,

C. SHAIN.
Chief Food Inspector.

To: JAMES ROBERTS, M.D.
Medical Officer of Health.

Sir:

I have the honour to submit the following report on my work, as Dairy Farm Inspector, from December 1st, 1920 to October 31st, 1921.

During the above mentioned period the number of producers who shipped milk to the City of Hamilton, varied from 400 to 440; the milk being shipped mostly from within a radius of twenty miles.

Little difficulty is experienced by local dealers, in obtaining a sufficient supply of milk, as a list of producers is always available in the event of an inadequate supply.

The number of visits to Dairy Farms during the year was 1,797, some of the farms being visited more frequently on account of existing conditions, which required improvement.

Eleven producers were excluded from shipping milk to the city, for not complying with the city regulations.

Improvements on Dairy Farms within the past year were made as follows:—

Number of milk houses built	64
" " barns built	5
" " milk houses under construction	4
" " milk houses being repaired	15
" " stables being repaired	10
" " stables whitewashed	322
" " inspections for dairy farm license	94
" " milk licenses refused	3
" " temperatures taken of milk	807
" " licenses cancelled	8

Notices were Served as Follows:—

Notice to build milk houses	116
" " repair milk houses	18
" " repair stables	13
" " remove hogs from stable	65
" " remove fowl from stable	6
" remove accumulations of manure	19
" " clean cattle	70
" " whitewash stables	328
" " discontinue use of milk on account of disease in herd	2
" on account of sediment in milk	110
" on account of high temperature of milk	337
" on account of low test of milk	24

Respectfully submitted,

J. T. Arrell,
Dairy Farm Inspector.

Report on Social Service and Attendant Work in Connection with the Control of Venereal Diseases.

James Roberts, Esq. M.D.
Medical Officer of Health.

Sir:

I submit for your consideration my report on Social Service for the year ending October 31st, 1921.

The examination and treatment of patients have been conducted at, and controlled from the Venereal Disease Clinic, at the General Hospital.

Investigation of cases, advice to parents and a considerable amount of the work leading up to and following or subsequent to treatment at the Clinic has been conducted from the offices of the Health Department.

Towards the end of the year, separate offices were allotted to the Social Service section of the Health Department.

These offices are well equipped: and are conducive, on account of assured privacy, to an exchange of confidences with the Social Service Nurse, resulting

in the discovery of conditions necessitating treatment at the clinic and, affording help in other directions, which would not be possible except for such confidences.

From a careful study of social conditions in the City of Hamilton and as a result of investigation into the history of cases reported for treatment at the clinic, it is safe to assert that ignorance and folly are principally reponsible for the ravages occasioned by the diseases under consideration.

Investigation has revealed the fact that young people in their teens have contracted the disease as a result of ignorance regarding sex.

Such a disaster would, and could have been prevented, if the parents of these young people had by judicious teaching and timely counsel, advised them as to the wisdom of forming habits of self control and to the danger involved in acts of indiscretion.

Several young girls have been interviewed at the office and at the gaol, some of them only sixteen years of age.

The only instruction any of these girls received was from their associates.

It is not impossible to believe that if the mother of these girls had carefully instructed and advised them at the crucial period of their lives, many and possibly all of them might have been saved from the shadow that has fallen across the path of their young lives.

For it is in the home, by the mother to the daughter and by the father to the son, where such advice and directions can be expected to produce beneficial results.

It is impossible to estimate how much of the wastage of manhood and womanhood and childhood from the ravages of Venereal Disease might be prevented if parents would more fully realize the responsibility which is incumbent upon them to impress upon their children in early adolescence the stern necessity of avoiding all appearances of evil and carefully explaining the evils implied as only parents are capable of so explaining.

The following constitutes a summary of the work accomplished in connection with the Venereal Diseases Clinic at the General Hospital during the year.

Five hundred and fifty-nine patients reported for treatment. Of this number four hundred and seventy-four were new patients, and eighty-five were carried over from the previous year.

Seventy of these were found to be non-venereal, or patients who reported for examination as to freedom from venereal diseases.

Total No. under treatment	559.
for Syphilis	225.
for Gonorrhoea	183.
Non Venereal patients	70.

THE SYPHILIS CASES WERE AS FOLLOWS

Primary Syphilis	male	21	female	20	total	41
Secondary "	"	52	"	33	"	85
Tertiary Syphilis	male	63	female	20	total	83
Congenital "	"	5	"	6	"	11
Acquired under 16 years	"	0	"	5	"	5
Total						225

GONORRHOEA PATIENTS.

Acute Gonorrhoea	male	51	female	25	total	76
Chronic "	"	79	"	19	"	98
Children " under 10 years	"	0	"	9	"	9
Total						183

GONORRHOEA PATIENTS DISCHARGED.

(a)	Probably cured	male	37	female	13	total	50
	Children	"	0	"	3	"	3
	Total						53
(b)	Transferred for treatment elsewhere	male	38	female	2	total	40
	Children	"	4	"		"	44
	Total						44
(c)	Discharged without permission	male	33	female	6	total	39

SYPHILIS PATIENTS DISCHARGED.

(a)	Probably cured	male	1	female	0	total	1
(b)	Transferred for treatment elsewhere	male	20	female	9	total	29
	Children						1
	Total						30
(c)	Discharged without permission	male	24	female	18	total	42

Of congenital cases treated only one gave negative report.

Number of patients pregnant 8

Of these 6 were syphilis, and 2 gonorrhoea patients.

The syphilis patients were under treatment previous to confinement.

Result at confinement . . . . . 4 living births.

One child died at three months old.

Others are gaining and apparently well.

Four treated cases had negative Wassermanns just previous to confinement.

Two of these cases had strongly positive Wassermanns after confinement.

Two of these cases had negative Wassermanns after confinement.

Of the eight pregnancies, five were illegitimate.

One gonorrhoeal pregnancy, the baby died at seven weeks; this was a feeding case.

Six cases were admitted following confinement; no treatment for syphilis prior to confinement. Three of these cases were illegitimate pregnancies. Of these, there were four still-births and two living-births.

The unemployment situation has a great deal to do with the irregular or non-attendance of many of the patients. In following up these cases it is found that they belong to the transient section of the population. They do not always give their correct names, and are sometimes unknown by name to owners of rooming houses. No name has however been taken off the books for non-attendance until an attempt has been made to locate the delinquent. Many have left the city in quest of work elsewhere.

There have been several temporary reactions while at the clinic following phenarsenamine treatment; two severe reactions necessitating hospital treatment. There were also two cases of jaundice and one case of arsenical dermatitis. There has been no absence from work or confinement to bed as a result of treatment, with the exception of the two cases mentioned.

The records show that when mercury was given intramuscularly in conjunction with the arsenical preparations, better results were obtained.

Patients treated with phenarsenamine only, did not give negative Wassermanns for more than three months, although all clinical symptoms had disappeared. Eleven patients had negative Wassermanns periodically during the year. Neo diarsenol and mercury were given to these patients and later phenarsenamine and mercury. Practically identical results were obtained by the use of one as the other, with probably more temporary reactions from phenarsenamine than neo diarsenol.

It might be mentioned that three of the girls interviewed at the gaol were returned to the Mercer Reformatory, while five of the girls reporting at the clinic were also sent to the same Institution during the year.

CONCLUSIONS.

There is at the present time no institution in the city where girls who have erred, can be cared for, until provision can be made to give them a fresh start in life; or where girls remanded at the Police Court can be detained, except at the gaol. Such an institution is most desirable.

If such an Institution, or Home for Girls, were established in addition to the practicability of dealing with erring girls and those remanded from the Court, it would be possible to afford at least temporary shelter to many girls who may be stranded in the city without proper care, or for those who may be homeless or worse than homeless, in our city.

There is also a great need for an Infant's Home, for the care of such cases that may not be accepted at the Children's Home on account amongst other reasons, of the inadequate accommodation.

I have the honour to be,
Sir,
Your obedient servant,

AGNES HAYGARTH.
Social Service Nurse.

REPORT OF THE PUBLIC HEALTH NURSES FOR THE YEAR ENDING OCTOBER 31, 1921.

JAMES ROBERTS, ESQ. M.D.
Medical Officer of Health.

Sir:

It will be observed by reference to the table regarding the work accomplished by the Public Health Nurses, that 7,466 visits to homes, and schools, were made by us during the year.

As in other branches of Public Health work, we find it exceedingly difficult, if not impossible to record our work by statistics.

It is an established fact that the Public Health Nurse of to-day is taking her place in the front rank of organized effort directed towards the prevention of disease and the improvement of health conditions generally.

It is therefore necessary that if she is to be of the greatest assistance to the community, in such prevention of disease and improvement in health conditions, she should be thoroughly trained in her work; so that not only is it incumbent on her to be helpful to the sick and suffering, but to be essentially a health teacher in the home, the workshop and the school.

During the past year our work has been of a varied, and frequently, complex nature.

The table will show the number of homes and schools visited for communicable diseases; the number of cultures taken in connection with Diphtheria, of which 4,197 of such cultures were taken; of 1,800 school children examined in the class rooms for possible Scarlet Fever and Diphtheria infection, in addition to the taking of cultures.

It may be noted that during the examination of children in the schools, cases were discovered where membrane was actually in evidence; these children were promptly sent home, and immediately followed to the homes by nurses, where other members of the family were found to be infected.

These were invariably unreported cases; and had they not been recognized by the Nurses, would have become centres of infection with possible far-reaching results.

The other items in the table worthy of special mention are that 4,637 children were attended to after vaccination; 276 children examined for the possibility of a smallpox rash; assisting at the vaccination of 2,229 persons; 1,350 visits to homes for smallpox and vaccinations were made.

In visiting the homes of the people in connection with communicable diseases, vaccinations, child welfare, pre-natal work and for other reasons we have found no difficulty in dealing with the well informed in health matters; what few difficulties we have experienced in our work, have been amongst the foreign element in our midst, or those who might be described as being somewhat below the average in ordinary intelligence.

It is on such occasions that the tact, careful forethought, and knowledge of human nature, positively necessary elements in the disposition of a well trained Public Health Nurse, are put to the test.

Our visits to the homes of the people are principally in connection with communicable diseases, not only do we leave printed instructions as to caring for patients, regulations as to quarantine and isolation, but such information as is contained in the printed matter is invariably amplified by the nurse, and opportunity is generally afforded to advise the occupants of the premises as to the proper feeding of children, the necessity for sunlight and ventilation in the homes, the advisability of proper recreation, sleeping and meals; and other matter relating to health conditions.

The nurse is also afforded an opportunity of inspecting sanitary conveniences, and noting insanitary conditions; such conditions are invariably reported to the Division of Sanitary Inspection, who promptly attend to all such cases so reported.

During the course of these visits, we have on many occasions discovered diphtheria carriers. In all case of diphtheria notified to the Department every effort is exercised to trace the infection to its source.

This source is frequently found to be a more or less recent mild or unrecognized case, such an individual who might be apparently well; and unknown even to members of the household would be carrying virulent organisms of diphtheria in his nose or throat; he might be doing so, for long periods, or until discovered by the Public Health Nurse when visiting the home.

When such a carrier is discovered, he or she is kept under close observation, and treated practically the same as a patient convalescing from diphtheria. Cultures are taken at regular intervals, and the person is not released until at least two successive negative cultures can be obtained.

The Public Health Nurse is also useful in Child Welfare and pre-natal work.

It is here that the nurse is able to be of great service to young and inexperienced mothers.

It will be noticed from the record of visits, that the homes of 232 persons were visited in connection with Baby welfare work during the year.

We have noticed in our visits on such occasions, that the advice and direction of medical experts is frequently necessary, and reveals the positive necessity of a Child Welfare, and Pre-natal Clinics.

We earnestly hope that such Clinics will be established in connection with the Health Centre of the City Health Department at the earliest possible date.

When such Clinics are established, opportunity for even better service than has been hitherto possible, will be afforded for the Public Health Nurses, in their attention to infants and expectant mothers.

Respectfully submitted,

FLORENCE TORREY,
ANNIE B. BOYD,
CATHERINE G. HARRLEY,
Public Health Nurses.

RECORD OF VISITS BY THE PUBLIC HEALTH NURSES FOR THE YEAR.

No.	visits re Measles	290
"	" " Diphtheria	1465
"	" " Scarlet Fever	631
"	" " Mumps	82
"	" " Chickenpox	811
"	" " Whooping Cough	477
"	" " Influenza	53
"	" " Impetigo and Scabies	433
"	" " Tuberculosis	58
"	" " Typhoid Fever	39
"	" " Smallpox and Vaccinations	5146
"	" " Scarlet Fever releases	92
"	" " Instructions as to Quarantine and Isolation	288
"	of Diphtheria Cultures taken	4197
"	" Re-visits to homes	387
"	" School cards issued	172
"	" Children examined for return to school after vaccination	4637
"	" School children examined re Scarlet Fever and Diphtheria	1860
"	" Positive K. L. found in schools	156
"	" Homes inspected for insanitary conditions	326
"	" Baby Welfare visits	232
"	" Visits to Baby Farms	20
"	" Visits to Maternity Homes	31
"	" Miscellaneous calls	596
"	" Hours T. B. Clinic	86
"	" " V. D. Clinic	75

INGERSOLL

To the Chairman and Members of the Local Board of Health.

Gentlemen:—

I beg to submit my annual report for the year commencing Nov. 16, 1920, and ending Nov. 15, 1921.

The communicable diseases reported were as follows:—

Diphtheria	21
Smallpox	30
Typhoid	5
Syphilis	5
Gonorrhoea	1
Measles	1
Tuberculosis	3

The diphtheria cases were quarantined in their homes with the contacts, and each home afterwards properly fumigated.

It was also necessary to quarantine the smallpox patients and contacts in their own homes as we have no proper Isolation Hospital to take care of these cases. It was found necessary on account of the number of cases that developed in the Central School and Collegiate to vaccinate the pupils of both schools. The Provincial Public Health Nurses, Miss Burns and Miss Riddle, assisted very materially in carrying out this work and also in checking up any new cases that developed.

Of the five cases of typhoid, four of these were in a double house where well water was being used. The well was condemned after an analysis of the water was made at the laboratories of the Provincial Board of Health at London. The use of the water was ordered to be discontinued after the first case developed.

The total number of deaths during the year was 104, and the total number of births 136, of which ten were still-born.

Inspection of the source of supply of the water for use in our town system was made and samples of the town water were taken at intervals and forwarded to the Provincial Laboratories at London for analysis. The reports of these analyses showed that at no time was the water found to contain impurities sufficient to be at all dangerous to Public Health.

Inspection of the dairies and of the farms supplying milk for the town was made. Samples of milk from each dairy were taken at intervals and tested for cleanliness and for butter fat. This has resulted in an improvement in our milk supply.

Our meat shops are well kept and supplied with meat chiefly from regular abattoirs.

The slaughter houses have been inspected and on those buildings and surroundings which were below the requirements, improvements have been ordered.

Our Public Health Nurse, Miss Reid, is to be commended for the good work she is doing. This work has been greatly assisted by our Local Council of Women, an organization that is deserving of great praise for the excellent work they have done.

Yours truly,

(sgd) J. D. McDonald, *M.O.H.*

KINGSTON

Nov. 3rd., 1921.

To the Chairman and Members of the Local Board of Health, Kingston.

Gentlemen:—

I beg leave to submit the following report for the year 1921:

I had occasion to state in last year's report that the incidence of infectious disease was high. The same is true of conditions this year, both locally and generally, for the monthly reports in the Public Health Journal show that throughout the whole Province infectious diseases have been very prevalent. In the early months of the year diphtheria was most frequent in occurrence. For the past few months scarlet fever, at least in reported cases, heads the list. Smallpox gradually died out in the first half of the year. There were sixteen cases in Dec. 1920. The last case was in June, 1921. There have been only a few scattered cases of measles, and chickenpox but as a reminder that our water supply is not absolutely disease proof, we have had six cases of typhoid contracted within the City. This is immeasurably better than conditions of ten years ago, and yet it is higher than the uncontrollable minimum. Even the relatively good results we have are entirely due to chlorination of the water supply. If chlorination was stopped for twenty-four hours there would be many cases of intestinal infection. An intake pipe running out through a bed of sewage and subject to constant slight leakage will always be a menace to the community.

Among the cases of diphtheria reported have been a number of particularly virulent type ending fatally. Scarlet fever on the other hand while always dangerous has been of a more benign type in the majority of cases, and there is no doubt that the continuance of the disease is due to the fact that many of these milder cases are overlooked by parents, never seen by a physician, and wander freely among their fellows spreading this disease.

I reported last year that a clinic for the treatment of venereal diseases had been arranged for at the General Hospital, the arrangements for its establishment had been agreed to after conferences between representatives of the Provincial Board of Health, the Local Board of Health, and the Staff of the General Hospital. It was pointed out by the Local Representatives at the time of these conferences that a clinic in connection with the General Hospital would not require exactly the same personnel and management as a separate clinic under a Local Board of Health, and as the Kingston Board was not willing to undertake the establishment and management of such a clinic, the General Hospital Staff was with the approval of the District Health Officer, requested to assume these responsibilities, it being understood that the usual grants arranged for in the Provincial scheme would be paid over to the Hospital. The clinic was inspected by the Provincial authorities when ready to take cases, was pronounced satisfactory, and began the work of caring for these types of cases in Kingston and the surrounding district. Some fifteen hundred cases were cared for last year, but owing to the fact that the Hospital authorities considered the work of a Social Service Nurse superfluous in connection with the clinic, the Government grant was withheld. I have since been informed by Dr. Ross, Superintendent of the Hospital, that on account of this attitude on the part of the Provincial Board he has closed the clinic, and will treat no more patients. It is to be regretted that some way cannot be found

to overcome this difficulty. The clinic was well under way, was doing excellent work, and its value was becoming more widely recognized in the District as the months went by.

The conferences of a year ago between the Local Board of Health and the Milk Producers, looking forward to the establishment of a central plant for pasteurizing and distributing milk came to an end without any action being taken, but were a value to all parties concerned in the exchange of views, and increased knowledge through this exchange. Partly as a result of these conferences it was agreed that bacteriological examination of milk samples should be made at the Provincial Laboratory under direction of Prof. James Millar, as it was felt that this would be a more effective means of determining the quality of milk delivered to the householder. Prof. Miller's report has been forwarded, and on the whole the quality of the milk supplied has been good, some samples showing a higher standard during the hot weather of July last than is required for certified milk.

As mentioned in my last report little can be done in the matter of housing conditions until labour and material have become more stabilized. There are many places serving as residences that should be closed up, but until house building can again show a profit for the intending investor it is impossible to think of destroying any of the accommodation we have, inadequate though it may be.

All of which is respectfully submitted.

A. R. Williamson.
Medical Officer of Health.

KITCHENER

KITCHENER, November 29th, 1921.

The Mayor, Chairman and Members, Local Board of Health, Kitchener, Ont.

Gentlemen:

I beg to present the Medical Health Officer's report for 1921.

There were 277 deaths recorded during the year and of this number 36 were premature or still-born children.

There were 585 births recorded.

There were 18 deaths from cancer, 10 deaths from tuberculosis, 6 less than last year. 1 case of typhoid fever was reported. There were a number of cases of smallpox during the first half of the year, but only two families have been quarantined since July 1st. There were 2 deaths from scarlet fever, but while the number of cases has been greater than last year the great majority of them have been of a mild type.

There were 10 deaths from diphtheria. Parents have been warned to call in a physician early in cases of sore throat. The disease is at present well under control.

There were 2 deaths attributed to measles and 4 deaths attributed to whooping cough.

The milk supply has been on the whole good and up to the required standard.

The water supply is good. I understand that when the Strange Street extensions are completed Kitchener will have ample artesian well water for years to come with sufficient storage to tide over the dry spells.

The Baby Clinic, organized in June by the Provincial Board of Health, is proving a success. The Clinic was carried on by the Provincial Board during June and July and taken over by the Local Board in August and a regular nurse installed. The attendance has been very satisfactory, each week a number of new patients have been added to the list. The physicians of the City have been faithful in their attendance, and the Library Board has kindly granted the use of one of its rooms.

Respectfully submitted,
JOHN MCGILLAWEE,
M.O.H.

LONDON

Dr. John W. S. McCullough, Chief Officer of Health, Toronto, Ontario.

DEAR DOCTOR:—

Dec. 9, 1921.

Annual Report of M.O.H., 1922.

I am very glad to begin this report by saying that we had practically no influenza, with pneumonia, in the city during 1921. The two previous years we had a goodly number of such cases in the city, and a number of these cases had to be taken care of by the local board as the hospitals soon became filled to capacity. These conditions provided a good deal of work and worry for the board.

The following cases were reported for the twelve months, ending November 30, 1921:—

Diphtheria	244
Scarlet fever	176
Smallpox	47
Tuberculosis	82
Typhoid fever	91
Venereal Disease	158
Chickenpox	267
Measles	500
Whooping cough	85
Mumps	57
Cerebro Spinal Meningitis	1
Impetigo	310
Scabies	242
Ringworm	42
Pink Eyes	43
Total	2345

Each case requires at least two calls; one to quarantine or indicate the patient and one to release patient. In some cases, such as diphtheria and where there is more than one patient in a house, we have to make several calls at one home.

The number of cases of diphtheria is greater this year than last. There were more cases than usual during the summer and autumn. The mortality is lower this year but still too high. This condition is due to carelessness of parents in neglecting to call a physician early in the disease in which cases antitoxin would have been given earlier and many of these lives would be saved.

There is a considerable increase in the number of cases of scarlet fever. This may be accounted for by the fact that more or less of an epidemic of this disease passed over Western Ontario early last winter. Our scarlet fever ward was crowded for several weeks and many cases had to be treated at home that otherwise would have gone into the scarlet fever ward.

There were about three times as many cases of smallpox during 1921 as there were in 1920. I personally examined each case and secured as good a history as possible. The histories showed that a good many of the cases were contracted outside of the city, but developed here after the usual incubation period. During the past two years I have seen more severe cases than in previous years. A few of the cases last year were semiconfluent. A number of cases had from 100 to 150 pustules on the palm of each hand. It maybe that the disease is tending to become more severe.

There were more than twice as many cases of chickenpox in 1921 than there were in 1920; most of the cases occurred during the winter and early spring. I made it a practice to examine every case thoroughly and to get a history of the

case. By these methods I discovered five cases of smallpox that had been diagnosed as chickenpox. These were promptly quarantined and contacts vaccinated thus preventing what might have been epidemics of uncertain dimensions.

The percentage of increase in typhoid fever is greater than in any other disease. Nearly all of these cases occurred at the Ontario Hospital in which institution an epidemic occurred following the flooded conditions of city and surrounding country during the very heavy rains of July 3rd. The private water supply of the Ontario Hospital became contaminated and many patients and employees contracted the disease at the institution.

There was a great increase in the number of cases of measles. This disease is more difficult to control than any of the others due to the long incubation period and to the fact that there are always hidden cases that are not reported either from fear of quarantine or because the disease is thought lightly of by the public. It is more communicable than any other disease.

There is an increase in the number of cases of venereal disease reported. This does not indicate that the disease is on the increase. It means that the public have been aroused to the seriousness of the disease through publicity and a larger percentage of cases are being treated than formerly. In this connection a splendid work is being done by the venereal disease clinic under Dr. Gunn with Miss McVicar as assisting nurse.

All public and separate schools were inspected as to sanitation and ventilation. Recommendations and suggestions were made when thought necessary. There is an improvement on the conditions existing a year previous. Detailed reports on each school are attached.

During the year sanitary inspections of dairies, herds, and utensils was carried out vigorously by Dr. C. S. Tamlin. Some dairies were forbidden to sell milk in the city on account of unsanitary conditions and several were prosecuted in police court for violations of the milk by-law and for maintaining unsanitary conditions. Results are seen in samples of milk examined later in the season. A large number of these samples could be classified as certified milk.

Mr. R. H. Sanders and Mr. H. Boss have been very energetic and thorough in their inspections of restaurants, bakeshops, fish shops, butcher shops, laundries, barber shops, unsanitary toilets, dirty yards, etc., with the result that these places are now in very good condition.

We are now working under a good plumbing by-law which is being enforced by Mr. Jas. C. Young. Matters in this department are working out well under Mr. Young and very few complaints are heard.

During the year we frequently had to take cases to police court in order to enforce the Public Health Act. These cases included people with communicable disease who had to be forced to obey proper restrictions, and preventive measures in cases where is was impossible otherwise to get unsanitary conditions removed.

Mrs. Patterson as infectious disease nurse and Miss McGugan as nurse for the department of tuberculosis are faithfully carrying out their duties. The Board of Health is fortunate in having secured their services.

The M.O.H. has always found Chairman Dr. O. I. Cunningham, J. H. Saunders, Alderman Drake and Secretary S. Baker ready and anxious to assist him at all times. He has often called on them for suggestions and advice and they have never failed to give freely of their time and ability.

Your obedient servant.

W. S. Downham,

Medical Officer of Health.

Chairman and Members, Board of Health.

Gentlemen:

I beg to submit my report as Secretary of the Board of Health for the year 1921.

Meetings.

The Board of Health held thirteen meetings and the attendance of the members was as follows:

J. H. Saunders	13	
O. I. Cunningham and Dr. Downham	11	each
G. B. Drake	3	
His Worship Mayor Little	1	

Plumbing By-law.

Mr. F. A. Dallyn, of the Provincial Board of Health, attended a Board of Health meeting in February and discussed the proposed plumbing by-law generally. The suggestion of Mr. Dallyn that the by-law be amended so as to comply with the requirements of the Provincial Board was adopted, and the by-law received the approval of the Council. It was decided to discontinue the license fees for plumbers. The Inspector of Plumbing reports monthly to the Board on the plumbing conditions of the city.

Restaurants.

The City Solicitor advised that the Council had no power to pass a restaurant by-law. The Board adopted regulations governing restaurants and these have been put into force. The Inspector reports a very great improvement in city restaurants

Sewers.

The Board received petitions respecting sanitary sewers from Delaware Street, Glasgow Street and Regine Street. The Board approved of the construction of these sewers on sanitary grounds and the facts were reported to the Council. By-laws were subsequently passed.

Milk By-law.

A number of important amendments have been made to the milk by-law and the Board is now considering the question of having all herds inspected and certified by the Dominion Board.

Clean Up Week.

The Board appointed no house to house inspectors but continued the work of last year, approving of the work of the Boy's Council of the Y.M.C.A. The campaign put on by the young men was productive of keener interest and more satisfactory work.

Having these matters under the Sanitary Inspectors has proved much better than the old method of temporary inspectors.

Miss Barons' Resignation.

Miss Barons, Tuberculosis Nurse for the city, resigned on her marriage. Miss Barons' work was of an exceedingly high order and her services were very much appreciated by the Board.

Complaints.

Very many complaints were satisfactorily dealt with by the Inspector. The question of the condition of private lanes was brought to the attention of the Board and dealt with successfully through the Inspectors.

Thorne's Cleaning Works on York Street was vigorously complained of to the Board by a number of ratepayers adjacent thereto. Again the Sanitary Inspectors have been successful in securing an amelioration.

The conditions in the East End respecting the slaughter house have proved more difficult, but there has been an abatement of the nuisance.

The Orchard Street drain also was up before the Board and, with the assistance of the Engineer, materially improved.

Hyman's Tannery was found in a fair condition.

H. Boss Appointment.

R. H. Saunders, who took the place of James Lutman, superannuated, has rendered splendid service. The appointment of Mr. Boss as Assistant Sanitary Inspector has enabled the Board to have the sanitary inspections of the city done more satisfactorily than at any time in its history.

Western Fair Grounds.

The Board felt it to be its duty to call the attention of the Western Fair Board to the need of improving the sanitary conditions for Fair time. With the co-operation of the Fair Board, this difficulty will be lessened.

Reports.

The reports of the Sanitary Inspector, as printed in the minutes monthly, show that 4,263 visits have been made by the sanitary inspectors.

116 tests of water suppply were made by Dr. Slack of the Hygienic Institute and, in most cases, the water was shown to be of good quality.

Dr. Tamlin made 399 inspections of herds during the year.

The milk examinations, totalling 556, show that the milk supply of London is of excellent quality and remarkably clean.

Dr. Downham's report on contagious diseases, submitted at each meeting, will give the standing and the number of cases.

Mrs. Patterson, the Public Health Nurse, made upwards of 1,340 visits.

Miss McGugan's report shows the number of cases of tuberculosis.

Miss McVicar's report shows 485 patients treated for venereal diseases.

The Plumbing Inspector reports 790 inspections of plumbing, 474 permits issued, $1,295.20 fees collected, 390 water tests made and 183 smoke tests.

All of which is respectfully submitted.

S. Baker.
Secretary.

The Chairman's Annual Report.

O. I. CUNNINGHAM:—

We are realizing to-day as never before the need for constructive development. We have protective tariffs to protect out industries, a navy to protect our shores, a merchant marine to protect our trade, great irrigation projects to reclaim waste lands. We have a thousand ways to build up our national wealth and prosperity, but what of health? What are we doing to conserve our health?

The answer must be self-convicting. As a nation, a community or as an individual we are guilty of no greater crime than the widespread neglect of health conservation. Modern mothers would be horrified if their religions demanded that each year a certain number of children be sacrificed to heathen gods; but equally violent death is being met by just this many children, who through carelessness or ignorance meet untimely death each year. We may call this sacrifice. The foregoing is not a criticism of our health department, for with the meagre money at its command we are doing over 100% efficiency. But I would be recreant of my duty if I did not call your attention to the greater possibilities for service to humanity which this department could and would do if only given the opportunity. Because our city is doing more than the average of the country over, it is not enough; with the excellent facilities which we have here we should be in the very front.

It is not to be expected that the members of the City Council or boards of estimates will be conversant with modern health practices; and it is therefore the duty of this board to formulate some plan which will bring to their attention in a more forceful and understandable manner the real importance of health protective measures. We should not have a repetition of last year when the board of estimates cut the health department's allowance without even consulting the department, especially as we now receive less than 25c. per capita for health measures. At the same time they increased the fire department by more than the total of the health department. The ratio is now nine times as much for to protect your personal property from fire, as to protect your health. Only through a plan of education can this be put on a proper basis.

I would like to see a more efficient system in the department not only in statistics, but in valuating the relative importance of the various functions of the department, not of its assets, but of its activities, and therefore try to place a definite value on the various phases of the work. The department could eliminate many unnecessary or illogical duties; and would also have the effect of placing more emphasis on those activities which are likely to produce the greatest results.

Unfortunately to the legitimate activities of a health department are often added duties which, in the light of present knowledge have little or nothing to do with preventing sickness or decreasing mortality. It should be quite obvious that where the money at the command of the department is very limited, that that money should be used where and in such manner as will give the best results in the saving of lives and preventing sickness.

Some of this may be considered idealistic, but the health department will never reach its real place until it is able to put a proper value on its activities, and then concentrate on the most important. It will then be found that tuberculosis, the milk supply, the direct control of communicable diseases, infant mortality, the visiting nurse, home isolation, vital statistics, etc. are vastly more important than detect-

ing bad odours, inspecting yards and dumps, plumbing installation, and many other petty nuisances, many of which could and should be turned over to other civic bodies, such as the police and garbage departments.

In receiving the reports of the different officers of the department, one's attention is called to the very thorough and efficient work that each is doing. As your chairman this year, I have endeavoured to give each officer as much latitude as possible in working out their ideas, and when needed, backing up. The excellency of the reports bears out the wisdom of the method. Most noticeable perhaps is the milk supply, which has been gradually improving, until the last report is the best ever turned in by any city, and I wish to compliment Dr. Tamlin on his excellent work.

The work of the sanitary inspectors has been more than satisfactory, always willing, efficient and courteous, they have secured the desired results, seldom having to resort to coercion or the courts, but where such was necessary, the case was tried and a conviction secured. The results are very gratifying. The hotels, restaurants, butcher shops, and all places where food or food supplies are handled are now being kept up to a high standard.

Considering the general apathy toward the health department, which is directly reflected in the small allowance given for its maintenance, Dr. Downham is to be congratulated on the results obtained. In his special department, that of contagious diseases, with one or two exceptions the city has been very free. Typhoid and smallpox have been at a minimum, but measles and chickenpox have been altogether too prevalent. This condition should not be laid at the door of the health department, but rather with the citizens directly, who take these matters altogether too lightly, and until the department is in a position to put over an educational campaign, these conditions will continue to exist. The nurses in this department have worked arduously and efficiently. While their work is not as spectacular as some other branches, it is nevertheless about the most important, and the department would be better served by adding another nurse, especially in the tuberculosis division.

The maintaining of the venereal clinic shows real and valuable progress, and is a branch of the work which should be encouraged and helped to the utmost.

The putting into operation of the revised plumbing by-law is a source of gratification; it is operating smoothly and the people are assured of satisfactory plumbing at a much reduced cost to what it might have been.

Special mention should be made of the Public Utilities board for the purity of the City water supply, and for their ready willingness to always keep it so. A pure water supply is a great help to a health department.

And now a word to the officers of the department. To you the members of the health board, appointed by the Council must look for the technical knowledge, and suggestions for improvement and advances. The growth and efficiency of the department will be in direct ratio to the interest and enthusiasm which you put into your work. I would like to see the department carry on its efforts for tuberculosis herds, and for clean work, also for the proper bottling of milk; to formulate and carry out an educational campaign to the people and the City Council, and to try to obtain in conjunction with the Institute of Public Health a statistician.

The great strides that have been made in preventive medicine have advanced faster than the peoples' knowledge in those matters, and until the people can catch up, as it were, with these new conditions, the passing of rules and regulations is almost useless.

In conclusion I wish to thank the members of the Board and the officers of the Department for the help you so courteously and willingly gave me. All of my associations in connection with the Department of Health have been of the most pleasant ,and if one thought is more uppermost in my mind than another, at this parting hour, it is that we should so shape our endeavours, that the Department of Health may have a future growth commensurate with its importance——for

As we have plucked the fruit of others' planting let us in thoughtfulness plant for others yet to be.

NEW LISKEARD.

I beg to submit the Annual Report of the Board of Health for the year ending November 30th, 1921.

Vital Statistics.

The number of births registered for the year was seventy-two, an increase of five over last year. The number of deaths reported was twenty-seven, a decrease of five from last year.

Causes of deaths given as follows:—

Still-born	1
Angina Pectoris	1
Congenital weakness	2
Cardio-renal Toxæmia	2
Old Age and Pleurisy	1
Pneumonia	3
Premature Birth	4
Chronic Cholecystitis	1
Endocarditis	5
Malnutrition	1
Gastro Intestinal Catarrh and Jaundice	1
Accidental Drowning	2
Anamoly of Heart	1
Obstruction of bowels	2
	27

We are pleased to report that within the year there are no deaths from tuberculosis registered. Our town has always been particularly fortunate in this regard.

Contagious Diseases.

Scarlet Fever:—Five cases were reported early in the year. These were of a mild type, in fact had it not been that there was already one case in the house the other two would not have been recognized. They were promptly quarantined and the disease did not spread further. Prompt notification and quarantine of scarlet fever is the best method of preventing an epidemic.

Tuberculosis:—Three cases have been reported. This is an increase over last year when one was reported which came from another part of the country. Early diagnosis and proper care of themselves by patients suffering from this disease is doing more every year to keep down the death rate.

Smallpox:—There have been several cases in town during the year. We were unable to trace the origin of the infection. Many originated in town but there were also some from outside. The disease in most cases was of an exceptionally mild type and was therefore hard to differentiate from chicken-pox. No deaths resulted from this disease and it is now stamped out in town, no cases having been reported for two months.

Measles:—There have been no cases reported.

Diphtheria:—No cases.

Typhoid Fever:—There have been no cases reported during the year. This is much more satisfactory than last year when eight cases were reported. During the months of August and September there was an epidemic of dysentery of a severe type. We believe that this was prevalent in a large part of the province but, so far as our municipality was concerned, we were unable to discover

any cause for it. No deaths were reported. Notwithstanding the exceptionally hot weather during June and July there was very little summer complaint among infants. This speaks well for our water and milk supply.

Water Supply.

This has been kept up to the usual high standard. In accordance with instructions from your Board the water has been limited, so far as possible to that from the wells. It is only at times when the wells are unable to provide sufficient water that water from the springs has been used. Inspection of the pipe leading from the springs was carried out during the low water and several leaks, admitting lake water, were discovered. These were repaired. This work added materially to the safety of our emergency supply of drinking water. Your board would advise the citizens generally that the presence of air in the water, as seen occasionally, is in no way detrimental to its quality as this air is put there by the pump when there is not enough water to keep it going to capacity.

The milk supply has been kept up to a good standard throughout the year. While the dairies are small and have not all the equipment that larger dairies can maintain, the quality of milk supplied has been good. Very good evidence of this is found in the small number of cases of infant diarrhoea occuring during the hot weather.

The sanitary conditions in town have shown improvement as has been the case each year since our present scavenger has been on the work. Your Board would draw the attention of the public to the fact that dead animals may be taken to the dump only after the owner has received permission and, when so taken, must be destroyed. In other cases, where the scavenger takes them, he is responsible for this work.

In conclusion I wish to thank the other members of the Board and the Sanitary Inspector for their co-operation and assistance during the year.

All of which is respectfully submitted.

J. S. McCullough, M.A. B.A.,
Medical Officer of Health.

NIAGARA FALLS

NIAGARA FALLS, CANADA, DEC. 21ST, 1921.

The Chairman and Members of the Local Board of Health.

GENTLEMEN.—I beg leave to submit my report for the year ending Nov. 30 1921.

In the present year there were in the City of Niagara Falls four hundred and seventeen births including twenty-three still born, and for the same period one hundred and eighty deaths.

We have had no epidemics of any kind except in the autumn a large number of cases of chickenpox, the cases proving very mild.

Three cases of smallpox appeared in November and December, one was more or less serious, the other two mild. The mild cases had been vaccinated while young.

Our two school nurses have been doing excellent work among the schools, and house visiting. It was through them that we located most of our chickenpox.

Our city nurse Miss Forbes is doing good work in the city, looking after the mothers, and children of pre-school age, having a clinic each week with a doctor in attendance.

The city is undertaking to build a large trunk sewer along Muddy Run Creek approved by the Provincial Board of Health. This will cost about $350,000 and will be a great benefit to the city at large, and the outlying districts. The work is continuing through the winter which no doubt will benefit and help the unemployed.

Our milk supply is adequate and is well up in butter fat. Our inspector is very efficient, and tests the milk thoroughly and repeatedly.

The water supply has proven fairly free from Coli, samples are analyzed each week, and reports issued. The chlorine at the present time is about eight parts in a million, although in September we had 16 parts to the million for a short time.

A new school has been built at a cost of $110.000, which will take care of the oversupply for some time. This gives us six large schools with about forty teachers.

I would strongly recommend an Isolation Hospital. We are a border town, and a town which has an influx of visitors every month in the year from every country on the Continent. This Hospital should be built.

Our new General Hospital built this year is a credit to the city. It has increased the accommodation for the sick four fold.

All of which is respectfully submitted,

H. LOGAN,
M.O.H.

NORTH BAY.

To the Mayor and Council,
North Bay, Ont.

Gentlemen:—

I beg leave to submit my seventh annual report as Medical Officer of Health of this Municipality.

1. Vital Statistics

Estimated population		11,402	
1920		10,924	Increase 478
Births, Males	237	1920	
Births, Females	180		
Total	417	424	Decrease 7
Marriages	121	129	" 8
Deaths	137	189	" 52

Deaths were due to the following diseases:—

Still-born and accidents of pregnancy	39
Broncho-Pneumonia	14
Heart Disease	14
Diseases of Digestive Tract	8
Appendicitis	3
Paralysis	4
Erysipelas	1
Tuberculosis	1
Meningitis	3
Cancer	1
Typhoid Fever	2
Brights Disease	
Diabetes	1
Accidents	6
Diphtheria	3
Scarlet Fever	2
Croup	3
Various causes	29
Pleurisy	1

2. Communicable Diseases

Diphtheria	77 cases,	3 deaths.
Smallpox	56 "	0 "
Scarlet Fever	35 "	2 "
Typhoid Fever	8 "	2 "
Chicken-Pox	7 "	0 "
Tuberculosis	4 "	1 "

It will be observed that the increase in popuation according to the assessment is 478 over that of 1920. The deaths of 137 are 52 less than in the previous year, leaving a surplus of Births over Deaths in the year, of 341. Taking this natural increase away from the total increase, we find that 137 people have taken up their residence in the town for some reason or other, this, not taking into account the removals which are more than taken care of by the increase.

In analysing the deaths, we find a very noticeable decrease of 56 over that of 1920. This is largely due to a decrease of 13 on account of still births and accidents of pregnancy and 10 less deaths due to Pneumonia and to the fact that in 1920 there were 22 deaths due to Influenza and none in the current year. There were 7 deaths due to Communicable disease in 1921 as against 35 in 1920, so that the Municipality, from this factor, has been freer than in other years.

Diphtheria

There has been more of this disease prevalent during the last year than in 1920, 77 cases as against 44. These cases have occurred mostly during the school terms, when contact was mostly carried out. There were 3 deaths in spite of the fact that Anti-Toxin is supplied free by the Provincial Board of Health. Two of these deaths were due to late administration of the remedy and the third from a mixed infection causing Septicemia after the throat was free of membrane. It must be said that the parents were the responsible parties in calling their physicians in too late in two cases, the third being in an adult whom I saw in consultation.

Small-Pox

There were 56 cases reported and quarantined. Some six cases came from without the Municipality and were housed at our Isolation Hospital. Fees were collected from these by our Inspector, Mr. Tandy, as far as possible. A good many coming from lumber camps, we collected from the lumber firms concerned. There were no deaths from this disease and we are surprised that people do not avail themselves of vaccination and so save themselves from the disease with the serious loss of time and inconvenience involved.

Scarlet Fever

We have had 35 cases of this disease, as against 24 in 1920. These occurred throughout the year, but in no epidemic form, and 2 deaths resulted. Most of these cases were of a mild character fortunately, and we found a great deal of objection to the long quarantine of six weeks imposed by the Provincial regulations. The disease is communicable, however, for five weeks, and so to protect others the long period is required.

Typhoid Fever

There were 8 cases of this disease with 2 deaths. One of these cases occurred in an Italian and was a very severe and malignant type and though removed to the Hospital from a shack on Front St., he lived only two days, dying with a temperature reaching 107°. We could not ascertain the source of this infection. The other case, we feel sure, was traceable to bathing in the lake in too close proximity to the discharge pipe of the East End Septic Tank. Apart from some cases from out of town and treated in our Hospital, I believe bathing in Lake Nipissing is responsible for most of the cases that occur here and not from food or water.

Tuberculosis

Four cases were reported with one death. One case was sent to the Weston Sanitarium and returned much improved in health, and is still under observation but with no cough or sputum. The other two cases are living, but in poor condition and ultimate outlook not good.

Venereal Diseases.

Under the V.D. Act, these cases are now reportable by serial number of the physicians. Several (7) cases each of Syphilis and Gonorrhoea were reported to

me and if the statistics collected by well known authorities are true, this is a very small percentage being reported. In some cities 15% of the population is reported infected with Syphilis. An investigation made a few years ago in the wards of the Toronto General Hospital disclosed 12% to be infected and the large percentage unaware of its presence. Osler calls this disease the "Killer of the Race" and Gonorrhoea the "Sterilizer." It was feared the soldiers on returning would be a menace to the civilian population but on investigation, it was found to be the reverse and the disease much more prevalent among the people..

Dairies and Milk Supply.

The Laboratory has further assisted us this year in testing our milk supply. The butter fat content has been up to requirement of the Milk By-law. The bacterial count carried out in September disclosed a very high count, some samples, notably three samples from Powassan, growing over a million to a million and a half germs from sixteen drops of milk in 24 hours. This shows that milk held over 24 to 48 hours is not nearly as safe as that produced nearer town and brought in by the farmers direct to the local vendors. These latter showed about 60% less bacteria. The pasteurization of the milk is carried out during the summer heat by two dairies and yearly by one. We are of the opinion that the Milk By-law should be amended to compel all milk sold within the Municipality to be pasteurized. In this way, we can be sure that our children will be protected against communicable disease and tuberculosis. Licenses were granted to the following:—

Mrs. John Perry, Ferris township	No.	99
T. K. Purdon, Powassan, Ontario	"	100
W. F. Clark, Powassan, Ontario	"	101
A. McLeod, Widdifield, Ontario	"	102
W. Ostrum, Ferris	"	103
W. F. Dreany, Widdifield, Ontario	"	104
Mrs. S. Simms, North Bay, Ontario	"	105
Mrs. Geo. Souter, Widdifield, Ontario	"	106
Mrs. R. Leach, Widdifield, Ontario	"	107
H. Picard, North Bay, Ontario	"	108
Chas. Johnston, North Bay, Ontario	"	109
Geo. C. Smyth, North Bay, Ontario	"	110
Jas. Passmore, Ferris, Ontario	"	111

Public Health Nursing and Child Welfare Work.

The estimate to cover a salary for a Public Health Nurse was not passed by the Council notwithstanding the recommendation of the Board of Health. We believe this work in Ontario has demonstrated its worth and place and this town must follow suit, sooner or later. For the last few months, Miss Hally, Public Health Nurse from the Provincial Board of Health, has been conducting an investigation into the matter and her report will be before you shortly. In addition, Dr. W. J. Bell, of the Provincial Board of Health is now in our town conducting a Child Welfare Clinic and Demonstration of this project. The Medical Profession of the town are endorsing and supporting the movement and in due time a further request to cover appropriation for salary for a Public Health Nurse will be repeated. The importance of conserving to the town and State the lives of our children cannot be overestimated. In too many homes innocents are neglected ignorantly and, in some cases wilfully. In the well-to-do, the defects of the children are often ignored and it is the duty of the Public Health

Nurse to remind our citizens and parents of these defects, to call their attention to undernourishment and to assist the mothers in intelligently feeding them, as well as to advise them in their Pre-Natal care. We feel that our Municipalities should not hesitate to spend money to safeguard the child, to assist him to adult life under favourable conditions as well as to provide for streets, sidewalks and other proper expenditures.

Water.

The Town's water supply has been very thoroughly analysed this year at our Laboratory. Dr. Douglas very kindly undertakes to run through specimens daily, except Sunday. These samples disclosed a condition experienced in previous years that of the presence of intestinal bacteria in large numbers. The last report of the 5th. inst., showing as high a count as 40 in 16 drops of water, which undoubtedly shows contamination. Despite these Laboratory findings we have had no Typhoid Epidemic in town and we are of the opinion that the contamination is not of human origin, but of animal from which source we have little to fear. There is, however, always a possiblity that a Typhoid carrier may infect the water and so endanger this splendid water supply. We have endeavoured to safeguard this as much as possible and we are still of the opinion that sanitary control over its watershed should be given to this Corporation. In a measure, this is now possible through an amendment to the Public Utilities Act and which we shall be able to use at future times if it be necessary. The installation of a Chlorination Plant would safeguard our people still further and, in our opinion, should be installed for emergency use.

Sewers and Night Soil and Garbage Removal.

The building of sewers on Ann St., Morin St., etc., were duly approved and built during the year. The urgent need of further extensions to the Sewage System is apparent when one considers the fact that there are now in operation some 1,200 outside closets. These should be gradually reduced, and great reduction could be effected by converting the present storm sewer which runs from the corner of High St., and O'Brien street to where it empties into Chippewa at the corner of Regina and Second Ave., into a sanitary sewer. This would be a great advance. At present there are probably 50 or 60 houses now using this as a sanitary sewer, which is quite illegal and very dangerous. We find, also that there are 128 outhouses being used, which have sewers in the streets so located. Some of these are on rocky lots and expense is a big item in preventing use of the sewers. Some municipal scheme should be devised to overcome these difficulties. Mr. Tandy reported to me in August that the night soil is being removed satisfactorily by Mr. Roche and that the area at Trout Mills has received even better attention than is required by the agreement with the Township of Widdifield and that this source of contamination to our water supply is being guarded and prevented as far as possible.

Local Branch Laboratory.

Earlier in the year, the Branch Laboratory of the Provincial Board of Health got under way under the directorship of Dr. J. S. Douglas and his assistant Mr. Lawson. Close to 2000 specimens have been handled here during its short ex-

istence and has proved its very excellent and valuable service to the community. Despite the cost to the Town, we believe this money is well spent and is a distinct addition to the health of our citizens and conservation of life. The increased pay-roll to the town is a respectable sum alone, besides the expenditure normally attached to such an institution. We believe this institution will expand and in time the present buildings will be added to. The Medical Profession of the town have received the greatest courtesy, co-operation and help from Dr. Douglas, and his staff and equipment have always been at our disposal to assist in any way possible. The Department has kept on hand abundant supplies of free antitoxin and other vaccines, which were available for all emergencies and situations.

Conclusion.

I have received able support from my Inspector, Mr. Tandy and his own personal report speaks for itself. The District Medical Office, Dr. George and the Provincial Sanitary Inspector, A. R. White and his staff have been always available for consultation and assistance. The Council and Board of Health have also co-operated willingly. I beg leave to extend my appreciation and thanks to all.

All of which is respectfully submitted.

(Sgd.) EDGAR BRANDON, *M.O.H.*

NORTH BAY.

North Bay, December 13th., 1921.

(*Report of Sanitary Inspector, for 1921.*)

The Mayor and Council, North Bay, Ontario.

Gentlemen:—

I have much pleasure in submitting the following report of work done in this Department during the year 1921:—

The following gentlement constituted the Board of Health— L. W. Wilson, Chairman, T. M. Bourke, W. D. Parks, Mayor Ferguson (ex-office) and Dr. E. Brandon, M.O.H. The Board has met on five occasions, and dealt with the matters arising and usual routine work in an expeditious and satisfactory manner.

Sewers.

The section of Sewer on McIntyre St. to Ferguson St., was finished in the early part of the year, and several property owners have had Sanitary appliances installed and connected up to this Sewer. Applications for new Sewers on McPhail, Morin, Cedar and Ann Sts., and Home Ave., were made and approved both by the Provincial and Local Boards of Health. These Sewers have been laid and will give relief to quite a number of properties, which were without any outlet for Sanitary fixtures. We will follow up this matter, and impress the property owners with the value of connecting up at the earliest possible moment in the Sanitary interests of the Town.

Septic Tanks.

The Septic tank at the west end of the Town was cleaned out this spring, and is working fairly well, but as a matter of fact, the tanks appear to be inadequate for the amount of sewage to be treated effectually.

Plumbing.

Applications for thirty-five plumbing permits have been received and granted. This is twelve in excess of last year, and represents an expenditure of approximately $20,000.00.

Communicable Diseases.

One hundred and eighty-three cases have been reported this year:—

Scarlet Fever	35
Diphtheria	77
Small Pox	56
Typhoid Fever	8
Chicken Pox	7

All these cases were quarantined and afterwards the houses were disinfected. The Isolation Hospital had to be opened up to take care of a few cases of Smallpox from camps, etc.

Garbage Collection.

This was operated by the town till the end of April after which the collection was let out by contract to Mr. E. J. Roche under a By-law, and at a increased tariff. The contractor is making the usual collections and very few complaints have been received, so we must consider the work to be done in a satisfactory manner.

Night Soil Collection.

This work is operated by contract with Mr. E. J. Roche, at a cost to the town of $400.00 per month, as last year, and includes the collection of night-soil from Trout Lake. Mr. Roche is collecting from Trout Lake twice monthly, instead of service every three weeks as per agreement, which assists in keeping the surroundings at Trout Lake in a more sanitary condition. Complaint was made in the summer of the odor from dumping in the Sewer at Regina St. This was obviated by using the Septic Tank for several months. There are quite a number of outside closets in an unsanitary condition, owing to old age and other causes. These will have to be repaired or replaced before the summer months, and this matter will have attention, and we hope the co-operation of the public to get them in proper shape, without friction. We may say that Mr Roche is carrying out his contract to our satisfaction, and complaints are very few.

Water Supply.

Our water supply at Trout Lake has not been very satisfactory this year, and notice was served that it must be boiled before using for drinking purposes. It has been analyzed several times weekly during the year, and up to the present, is not nearly so good as last year. I have inspected the surroundings at Trout Lake, and cannot find any trace of leakage from closets, etc., which could reasonably get into the lake, so must come to the conclusion that the contamination is distributed in the lake from the creeks. I trust that the council of 1922 will support the Board of Health, and have an automatic Chlorination Plant installed, which will overcome the dangers of contamination and make the water safe for the public.

Dairies.

Inspection of dairies has been made in Widdifield, Ferris, Powassan and others sources of supply, which are twenty-two in number, and have been visited on several occasions this year, the Test Card system being adopted, and marks given for cleanliness, conditions of buildings, cattle and utensils, etc. The milk has been tested and test discs, etc. registered monthly, both by myself and on several occasions by the Laboratory, for germs, etc. During the warm weather, several samples showed an excessive quantity of bacteria. The samples all tested over the minimum of butter fat.

Market.

The market has been periodically visited and no flagrant breaking of our By-laws noticed. The fact that there is insufficient accommodation at present existing in our market building, has led to the offering of meat, etc., for sale in a rather primitive manner. This matter will have to be taken up by the authorities, as this state of things, with a growing market, cannot be tolerated.

To sum up the work in this Department, roughly, it would be as follows:—

Quarantine on houses	183
Disinfection of houses	183
Visiting patients, etc.,	300
Inspection of dairies, etc.,	75
Serving notices for abating nuisances	200
General inspection of closets, etc.	350
Milk samples taken	120
Taking care of Isolation Hospital and daily visits to same while occupied; Acting as Secretary to the Board of Health; General routine, office work, etc.	

In conclusion, my thanks are due to the members of the Board of Health, Dr. Brandon and Dr. George, District Officer of Health for the Province, and Provincial Officers A. White and J. Richardson, for their help at all times when requested.

Respectfully submitted,

ALFRED TANDY,
Sanitary Inspector.

ORILLIA.

To the Chairman and Members of the Orillia Board of Health.

Gentlemen,—

I have the honour to submit to you the report of the sanitary condition of the Town of Orillia for the year 1921. There have been reported during the year the following communicable diseases:

Smallpox	14 cases.
Poliomyelitis	9 "
Diphtheria	12 "
Scarlet Fever	1 "
Measles	3 "
Chickenpox	1 "
Whooping Cough	3 "
Typhoid Fever	2 "

Smallpox, which was prevalent for a year and a half, I am pleased to state, has entirely disappeared, not a case having been reported since the first week in July. Poliomyelitis, or infantile paralysis, existed to a far greater extent this year than ever before in the history of the town, there being only one case reported previously during my term of office. Dr. J. J. Fraser, District M.O.H., came to our assistance, but notwithstanding a careful investigation we were unable to locate its origin or decide how the victims caught the infection. It is regarded as communicable, and quarantine was strictly established both in town and township, where a number of cases occurred. Although a very dangerous disease only one death was caused by it. No fatal result followed any of the other contagious diseases.

You will observe that the town was practically free from typhoid, one case reported coming from outside, and the other was found in the outskirts where well water was used. This fact shows that filtration and chlorination has been well attended to by the Commission's engineer, Mr. Starr, and that the water supplied to the people of Orillia is free from contamination of every kind. But Lake Couchiching is in danger of pollution from three sources, viz. Mount Slaven and Tannery Creek, the Government ditch from the Moffat farm, and the boat-houses on the Lake front. Next year's council should take the necessary steps to have this danger removed.

Milk tests were made at regular intervals during the year, and the percentage of butter fat was above that required by the by-law, and from the point of cleanliness the milk was fairly good. No complaints were made and I was unable to trace any sickness among children due to the use of milk. I think it would be wise to demand from every vendor of raw milk a certificate that the herd supplying the milk is free from disease, particularly tuberculosis. Chief Murphy and Sanitary Inspector Litster, on recent inspection, found the dairy stables in a satisfactory condition.

All the meat consumed in town comes from outside points, especially Toronto. In Toronto all animals before being slaughtered are subjected to a rigid inspection so that no diseased meat is sent out from that point. But there are a number of wholesale butchers in the surrounding country who sell their product in Orillia and no proper inspection has been made of the animals killed by them. I would suggest that some reliable evidence should be supplied by such traders as to the quality of their stock. I have no fault to find with the butchers doing business in town.

The Sewer System has been extended and many new connections made. There has not been so much trouble with the pumping station and the main pipe on Simcoe Avenue.

Many complaints of nuisances have been received during the year, such as overflowing cesspools, privies not attended to, piggeries, etc., but in each case the Sanitary Inspector has looked after the matter complained of.

During the extreme heat of last summer complaints were brought to me that bathers in the Lake were attacked by an irritation of the skin caused by something in the water, but upon investigation it was found that the trouble was due to the heat and not to the water. While the town has good facilities for bathing, both at Couchiching Beach and Kitchener Park, they were far from adequate to meet the demand during the months of July and August, and it would be a good idea for the incoming Parks Commissioner to be on the look-out for more accomodation for next season. In this connection a word in praise of Park Superintedent Whitton is not out of place, for to his untiring energy and good work is due in a large measure the excellence of Orillia's beautiful breathing spaces.

I have the honour to be, Gentlemen,

(Sgd.) JOHN McLEAN, M.D.,
Medical Officer of Health.

OSHAWA

Oshawa, Ont.,
November 30, 1921.

Chairman and Members.
Local Board of Health.

SIRS:

It is my duty to lay before you the annual report, for the year 1921, of the work done by the Health Department.

"Money spent in the prevention of disease should be looked upon as insurance. Money spent for better health is returned to the community in terms of diminished disability, and decreased financial loss due to sickness."

ESTIMATED EXPENDITURE.

You will remember we placed an estimate before the Council of an expenditure of $7,000.00 for the year. It is now more than likely that we will complete the year to the first of January, 1922, within our estimate.

DEPARTMENTAL OFFICES.

About the middle of April, 1921, arrangements were made by means of which the offices of the Board of Health were removed from the Market Building to the new Municipal Building in the Pedlar Block, the future Central Public Park. Here, considerable room for expansion was provided, while at the same time all the officials of the Department were brought together in a suite of offices on the ground floor of the building, convenient of access to the public, and very suitable for our purposes. We have now an outer office for the Office Clerk and the two Public Health Nurses; a separate office for the Health Officer and the Sanitary Inspector; storage space for records, and equipment provided by the Red Cross; two cloak rooms, bathroom, supply room, a fine new refrigerator, obtained at a minimum cost through the kindness of Mr. W. R. Geikie, in which can be accommodated a full supply of all the serums and other supplies provided by the Provincial Board of Health for the prevention and care of Contagious Diseases. We have here, constantly on hand, stored under proper precautions, a readily available supply sufficient to meet any demand placed upon it by the doctors of Oshawa and the whole of the surrounding locality as far west as Whitby, as far north as Raglan, as far east as Bowmanville, and south to the Lake. From the use which has been made of these supplies, we know that in this provision we are meeting a long felt and important want.

ASSISTANT PUBLIC HEALTH NURSE.

On the first of September, 1921, we regretfully lost the services of the Assistant Public Health Nurse, Miss E. A. Gibbs. Her services had been of very great value to our work, particularly with the development of the Child Welfare Clinic for non-English speaking citizens, which was started in May, 1921, and has since been continued.

On October 1st, 1921, Miss D. Cross came on duty as Assistant Public Health Nurse, in the place of Miss Gibbs. Miss Cross was one of those nurses who had received special training in Public Health Nursing Service at the

University of Toronto, under the auspices of the Ontario Red Cross. The Local Board has been very fortunate in its selection of an Assistant Public Health Nurse. You will remember, the Assistant Public Health Nurse was provided by Mrs. F. W. Cowan out of her own private purse, because she had realized the necessity of the second nurse in the Department, and appreciated our inability to establish the nurse at that time. Now that a year of trial has been carried through, it will be necessary to make provision for the retention of Miss Cross on the permanent staff of this Department, paid by the Municipality. It will be absolutely impossible to get along with only one nurse. The work now occupies completely the time of both the nurses.

The approaching annexation of Cedardale, with its additional 1,200 population added to our own, will still further increase the duties of the Health Nurses.

From time to time I have commented on the unwisdom of carrying on our Public Health Nursing Service without any other means of transportation than walking.

Car for the Health Department.

Here again, the magnificent generosity of one who has repeatedly, in season and out of season, stood behind the Health Department in its work, has come to our assistance. I am at liberty to inform you that Mrs. F. W. Cowan has signified her intention to make a Christmas present to the Department, of an automobile to help out in the Health Work.

Red Cross.

Here is a fitting place for me to acknowledge the extremely great and continued assistance the Red Cross Local Branch is extending to us in our work. I am glad to say the Red Cross has a room on the second floor of the Municipal Building granted to it by the Municipal Council for its own use, and with which we are in intimate contact.

Permit me also to extend my personal thanks to all the officials of the Health Department for the services which they have given us this past year.

English-Speaking Child Welfare Clinic.

Miss Harris's Child Welfare Clinic, which was opened in June, 1920, in the Methodist Mission on Albert St., has steadily prospered, and is doing splendid work, as you will be able to see from her own report.

Epidemic Diseases.

During the past year, we have had none of the severe epidemics, such as we experienced in 1918, 1919, and 1920, of influenza, smallpox and diphtheria, nor have we found as much tendency as occurred in those years to outbreak of Communicable Diseases, grouped in certain specific areas of the town. The tendency has been rather to a more even, irregular, scattered appearance of the different diseases in all parts of the municipality.

Intestinal Diseases of Childhood.

This year has been marked by a great reduction in the number of reported cases of intestinal troubles with children. The Superintendent of the Oshawa

General Hospital has particularly commented on this fact. We have felt that the Child Welfare Clinics have been a great help in safeguarding against these troubles. It may also be that the intestinal diseases of childhood have not manifested the same severity this year as was exhibited in 1920. Whatever be the cause, we have reported this year only 18 deaths from intestinal diseases in children under 1 year while last year the number was 35.

COMMUNICABLE DISEASES.

Typhoid Fever.

Six cases of typhoid fever have been reported for the year. Four cases were known, definitely, to have received their infection outside of the Municipality. Of the two cases which arose in town, one contracted the infection from well water; the other from creek water. In no case, have we had any reason to suspect our local water supply, or milk supply.

Diphtheria.

Diphtheria has been less prevalent this year, and has been better handled. The search for "Carriers," the quarantining of exposed individuals, and the isolation of all "Carriers" and clinical cases of the disease, along the lines we found last year to be best, have prevented the spreading of this disease.

Six deaths have occurred from diphtheria. Just the same as was noted last year, we have found the heavy toll of this disease has been taken on the young children, whose susceptibility is greatest.

It is with the greatest thankfulness I am able to inform you that we have now at hand, for free distribution, what is known as the Schick Test, a method by means of which individuals of all ages susceptible to diphtheria may be found out with absolutely no danger to themselves.

Along with this, we have also the diphtheria toxin-antitoxin which is used for immunizing people permanently against diphtheria. This immunization is 90 per cent. absolute for people of all ages, and with no danger attached to its use. Like the Schick Test, toxin-antitoxin is provided by the Provincial Board of Health, free of charge. Once the medical men, and the public, learn the value of these methods, and make use of them, diphtheria will become a comparatively unknown disease.

Scarlet Fever.

Scarlet Fever has not been half so virulent this year as it was in 1920. We still find it hard to get people willing to understand the reasons for maintaining the full isolation period for this disease.

No special comment is required on the other Communicable Diseases, with the exception of two, tuberculosis and influenza.

Tuberculosis.

I wish to call your attention to the paragraph in Miss Harris's report where she says "tuberculosis is a problem." We feel we are not in touch with all the cases of tuberculosis at present in this Municipality. There is no Communicable Diseases we are more anxious to ferret out, and place under the necessary

precautionary measures for the protection of the individuals affected, the dwellers in the home, and the people with whom the afflicted persons come in contact.

The Oshawa Hospital has not as yet been able to provide special, isolated, and equipped wards for tuberculous people. It does the best it can with its present facilities. During the summer, three cases of tuberculosis were constantly looked after by this Institution.

Influenza.

From July, through to the end of the year, influenza has been present with us and fairly common. In the earlier months the intestinal form of the disease was quite common. In the latter months some bronchitis was usually found along with the intestinal trouble. In October and November, bronchitis with pneumonia has been manifested in several cases, two or three of the cases having presented quite the usual appearances of the milder cases seen in the 1918 epidemic.

National Sanatorium Campaign.

It was especially because of our difficulties in coping with this disease in the homes, and in the Oshawa Hospital, that I have taken a particular interest in the National Sanatorium for Tuberculosis Million Dollar Fund Campaign, knowing full well that the success of this institution spelled the quickest and easiest solution of our difficulty. We already have six, or more, cases of tuberculosis confined in the four different branches of this Institution.

It is a matter of congratulation that the quota $7,500.00 expected from this municipality in the campaign will ultimately be exceeded. While the donations from small givers have been light, the municipality, and several of the leading citizens, has given large bequests to the institution.

Births.

The births reported in the Municipality, in 1921, have been 420, eighty more than for the year 1920. Of these births, 6 were reported as illegitimate children.

Deaths.

The deaths reported in the municipality for the year 1921, have been 170, nine less than for the year 1920. One cannot fail to be shocked by the fact that over 41% of the death rate of this municipality was in infants under 1 year. If we exclude, from the deaths under 1 year, the 20 premature, and the 20 stillborn, as given by Miss Harris, for this year, under the lists of deaths, we find that 32 children of the 420 born in this year, that is, 7.6% died of intestinal and other diseases. Surely these percentages of deaths amongst the premature and stillborn, and infants under 1 year of age, indicate a large field of work in which the Public Health Nurses, if given an opportunity for doing pre-natal care and Child Welfare Work, can produce satisfactory results to the material benefit of this Municipality.

Deaths According to Periods of Age.

Deaths under 1 year of age	70
Deaths from 1-6 years of age	12
Deaths from 6-15 years of age	2
Deaths from 15 years upwards	86

Venereal Diseases.

There has been a definite improvement in social conditions in the Municipality, if one can judge from the number of cases of Venereal Diseases reported this year.

Of the Venereal Diseases reported, six were found in children under the age of 16 years, nearly 14.3%

Gonorrhœa	27
Syphilis	13
Chancroid	2

Water Supply.

Our municipal water supply has been of continued excellent quality and plentiful amount for the whole of the past year. No comment further than what is contained in the Sanitary Inspector's report is necessary, unless one would extend commendation to the Water Commissioners for the service they are giving the town.

Milk Supply.

The milk supply is not on as satisfactory a basis as could be desired. There is no question but that the failure to pass the Pasteurized Milk By-Law has been a detriment to the milk supply of the municipality. The only guarantee of safety to our milk, and of protection to our children against intestinal diseases, and other diseases which may be transmitted by infected milk, will be by the insistance on the pasteurization of all milk used for food. Your Board should recommend to the incoming Council of 1922 the adoption of a Pasteurized Milk By-Law, such as failed to pass the Council of 1921. No more important Public Health matter, of more far reaching consequences than this, will appear before the Board of Health of 1922.

Other Foods.

In referring to other foods I can do no more important duty than to repeat again the words of my report of 1920.

Not enough care is being given by the dealers who handle fresh fruits, vegetables, meat, pastry, etc., to the proper protection of their wares as exhibited for sale. I would suggest for your consideration the passing of a By-Law requiring all restaurants, fruit-stores, ice-cream parlours, candy shops, meat stores, fish stores, green grocery shops, bake-shops, pastry cook shops, and the like, to have a vestibuled entrance with screen doors at each end of the vestibule in the summer time, and at the inside end in the winter time; all other doors to be likewise screened; all windows to be screened their full size; all doors to have automatic closers. All raw fruit, candies, cakes, breads, meats, vegetables, etc., which may be eaten without further treatment, must be kept in glassed, screened, or closed containers or receptacles, until sold. When such articles are sold, they

are to be wrapped in paper, or placed in bags, or other containers of such a type that the materials may be removed from the dealers' premises to the consumers' home, without any danger of hand, dust, or fly contamination, or other soiling of the contained matter.

Population.

As a result of the industrial depression, and the limitation of the amount of work being turned out by our local industrial concerns, there has been a slight reduction in population, as shown by the Assessor's Roll. The population given in 1920 was 12,246 while for 1921 it is 11,582.

Garbage Disposal.

Garbage collection and disposal have been carried out much more satisfactorily this year than last. A very creditable endeavour to level out the fresh garbage and cover it with ashes or waste dirt each day, has been carried out. This has resulted in far less complaint than usual from the people living in the vicinity of the Dump. No satisfactory method of disposal of garbage will be obtained in this town until an incinerator has been established.

Streets.

The paving of King Street West from the Eastern boundary to the Canning Factory, together with the erection of the new cement bridge over the Creek on King Street and the grading up with gravel of the section of road between the canning factory and Mechanic Street, has made a very noticeable improvement in this part of the town. This work has been badly needed for a number of years.

The filling in of the holes in the pavement on King and Simcoe Streets, in the business section of the Town, has also been the fulfillment of a long delayed improvement. The grading up and filling in of Gibbs Street, where it crosses the Creek valley, while not yet completed, has opened up a very valuable means of access from East to West in the Southern part of the town.

Very little care has been given to the up-keep of the lateral or secondary streets of the town. To be sure, in the late Fall, some filling in and repair work was done on the very worst sections of roadway, but this work was in no way sufficient to put the streets in anything like reasonable repair. A systematic neglect of the secondary streets of the Town seems to have been carried out this past year.

The laying of the new Storm Sewer on Albert, Emma, Court, and Olive Streets, has once again put these streets into almost impassable condition, just when they had commenced to become decently useable.

It is absolutely necessary to remember that while money shows best on massed work, and thus presents tangible results, still a reasonable amount of repair should always be being carried out over the whole municipality. The inhabitants of such streets, business men, and general users of such streets, are surely entitled to some return of their taxes in the way of improvement of streets. It is to be hoped that next year a systematic overseeing, and keeping in repair of all streets, will be carried out.

Oiling of Streets.

During this past year $1,225.00 has been spent in the laying on of waste tarry material from the Gas Company Works on the dirt roads. Prof. Rogers' report, which you have already received, has demonstrated the unfitness of such material for road oiling, surface binding, allaying of dust, etc.

It has been stated that however bad this material was it had one good quality in that it was a water-proofing for the road. This statement is open to a very great deal of doubt, in as much as no endeavour was first made to build a proper road with suitable ditches, proper crown, grading of roadway, and leveling of surfaces before this material was flooded upon it. In consequence of this neglect, puddles of this oily material lay in the roads for days after it was placed on the road, serving only to maintain muck holes, and provide dirt to be carried into every adjacent house.

It is questionable if the supposed saving in cost of oiling of roads this year was anything else than a waste of money.

If oiling is going to be carried out next year, it is to be hoped that it will be preceded by a proper road making first; that only a superior grade of road oil will be used, and that the road will be closed to traffic for a sufficient number of hours after the sprinkling to allow the oil to set in.

Storm Outfall Sewer.

It is much to be hoped that the completion of the main storm outfall sewer to the east will abate the nuisance which has bothered the south-easterly section of the town for so many years. Completely satisfactory results will not, however, be secured until the storm and sanitary sewers are absolutely separated in the manholes, and until all rain water leaders discharging into sanitary sewers have been cut off from such connection, to discharge either on the open ground, or into adjacent storm sewers.

Rain Water Leaders Discharging Out Over the Sidewalk.

A considerable number of citizens seem to be unaware of the fact that it is contrary to the municipal by-law to carry rain water leaders out over sidewalks, above the level of the roadway, to allow these leaders to discharge into the ditch, or on to the roadway. These slovenly looking discharge pipes should be immediately done away with.

Gas Company Effluent.

As the gas company effluent is still being discharged into the town sewers, every effort must be made to see that no such effluent shall be discharged into the sewers without proof having been produced that such effluent will produce no harm to the sewers, nor create any nuisance. Such effluent must, on no account, be allowed any access, under any excuse, to the sanitary sewers.

Sanitary Sewerage Disposal.

We are still waiting for a satisfactory report of some economic method of sludge disposal before advising any steps to be taken towards the completion of our sanitary sewer disposal works.

At present, the chief things advisable for us to do are:—

(1) The reduction, as much as possible, to a minimum of the amount of waste water passing through the sanitary sewers, and the confining of this discharge to a true house sewage effluent.

(2) The protection of the Sanitary sewerage effluent from the mixing with it of any chemical material which would be liable to interfere with the fermentative, putrefactive and nitrificative processes carried on by the bacteria in the sedimentation tanks.

Water Supply, Danger To.

Until the completion of the sanitary sewage disposal system, and the chlorination of the effluent, every precaution must be taken to safeguard our water supply. Even though we have the new intake pipe drawing from a depth of thirty-five feet of water, and from 2,700 feet out, we still must safeguard our water supply by the addition of a proper amount of alum and of chlorine in the same way as we have been doing previously.

While the quantity of the water we are able to obtain depends on the intake, the pumping house machinery, and the mains, the quality of the water is always dependent on the weather conditions, the efficiency of the filters, and the proper addition of the necessary amount of alum and chlorine to the water as it passes through the filters. Additional to this also must be the maintenance of cleanliness of the supply mains from dirt and stagnant circulation, and also the cleanliness of the interior of the water tank.

One hundred and eighty house connections have been added to the water services this year at a cost of $19,600.

Horse Trough.

Two bank premises, which have been remodelled this year, have taken advantage of the opportunity to install sanitary drinking fountains for the benefit of the public. While on the question of water supply, I would like once more to call your attention to the necessity of removing the horse trough from the south side of King St. E., close to Simcoe St., to some more suitable locality, and its replacement by a sanitary fountain for the use of citizens and dogs.

New Buildings.

By far the most noticeably outstanding improvements made in the town this year have been those in business buildings in the central part of the town.

Municipal Buildings.

Chief of all has been the removal of the municipal offices, the town Engineer's department, the Waterworks Engineer's department, the Department of Health, the Education department, the office of the Children's Shelter, and the Red Cross rooms, to the Pedlar House in the Central Park ground. Next in order is the conversion of the old town hall building into an enlarged fire hall with sleeping quarters for the men, a new police office on the ground floor, a remodelled and up-to-date lock-up, and a redecorated auditorium, special attention having been given to the improvement of the acoustics of this part of the building.

Stores.

Probably the next striking change has been the remodelling of the Queens Hotel into four fine stores, with a modern front.

After these the important changes are the remodelling of the Cotter property on the corner of Simcoe and Bond Sts., by the Bank of Montreal for bank purposes; the new front on the Mitchell stores; the extension of the Dominion bank westerly to absorb the adjacent building, giving it handsome and commodious quarters; the two new stores on Simcoe St. N., occupied by Harper & Clemens; the store being built next to this by Mr. Lovell, and the new front placed by Mr. Everson in the property on the north-west corner of Bond and Simcoe Sts.; also the remodelling of the Methodist parsonage on Simcoe St. S.; and the store being built by Mr. Engel on the west side of Simcoe St. N. These new buildings, together with a few minor alterations made in other business blocks, complete the changes which have been rapidly taking place in the business section of the town, and will give an added air of business prosperity and financial stability.

Fewer houses have been built this year than in the preceding two years, but several of these have been of specially good quality. All told, the year has been one of important building activity.

Building By-Laws.

The departure of Engineer Shupe from the municipal service about the middle of the year, delayed the putting through of the Building By-Law, which it had been hoped would have been passed through the Council during this year. It is seriously to be desired that the new by-law will be prepared in a completed form for acceptance by the incoming Council of 1922. A proper code of building regulations is the most important matter now required by this municipality.

Town Planning.

The appointment on May 20th of this year of a Town Planning Commission marked an important step forward. It is to be hoped that this body will be able to secure at an early date an acceptable town plan with recommendations as to town zoning, park and play-ground allotment, development regulations, etc., such as to guarantee the growth of the municipality in all those directions which will lead to best civic development.

Isolation Hospital.

No further action has been taken this past year in the matter of an Isolation Hospital and the question remains the same as at the time of my last report in November, 1920.

While the demand for such an institution has not been as urgent this past year as previously, the need is still as great.

Oshawa General Hospital.

In my last report attention was called to the large amount of maternity work being done in the Oshawa General Hospital. It was noted that nearly fifty per cent of all the obstetrical work of the municipality had occurred inside of that institution. In 1921 there has been some falling off in the percentage,

which for this year is 31.5%. About 12.2% of the births reported at the Oshawa Hospital were premature or stillborn, while outside of the institution the same cases were about 10.4% of the births. There is *urgent* need for a special building or wing for this institution in which maternity work can be carried out. Several reasons may be noted.

(1) To absolutely separate and safeguard women who are going to become mothers from any contacts with other classes of patients in the institution.

(2) To provide accommodation for the infants born in this institution, and thus to remove them from the Main Building where they are a nuisance and a distress to all other patients.

(3) To protect the mothers and babes from acquiring any communicable diseases which might be brought into the general institution, either by patients or visitors.

(4) To allow an opportunity of having always one *clean* building in which the mothers and babies are protected from any danger of contamination with other disease.

It will be noticed the hospital reports in its list of deaths five cases of infants dying from malnutrition. These are children who, having become seriously ill before being discovered by a physician, were sent into the hospital too late to be benefited by any treatment they might receive there. They belong to the class of cases which it is hoped the Child Welfare Clinics, and the Public Health Nurses' visits will soon cause to disappear from our hospital and public health records.

The hospital has now nearing completion a much needed addition to the Nurses' Home, in which can be accommodated eight more nurses than are at present in training in the institution. In this extension, the Hospital Board is taking time by the forelock. Once the building is completed and occupied, it will be fully staffed for the proposed increased bed accommodation in the hospital proper, which the proposed additions now in contemplation will provide.

It is to be hoped that before very long the hospital Trustee Board will be able to see its way clear to providing a separate small building for:—

(1) The reception and observation of suspect new cases coming into the building.

(2) The accommodation of unpleasant cases and non-placardable communicable diseases, which may be sent into the hospital, and which must be received under the provisions of the Public Health Act. The placardable diseases are excluded from General Hospitals.

(3) The reception and treatment of venereal diseases, both outdoor and indoor clinic cases.

While such a building must not be construed to be in any sense an Isolation Hospital, but only an endeavour to comply in the best possible way with the regulations for the control of hospitals, it still represents a building of such importance in the field of preventive medicine that the Local Board of Health would be justified in recommending to the Municipal Council the granting of financial aid to the construction of such a hospital unit.

Children's Aid Society.

The Children's Aid Society has been finding difficulty in maintaining accommodation in the Shelter for the steadily increasing number of inmates that

is brought under its control. Difficulty has been found this year in placing children *fast enough* to relieve the pressure in the Shelter.

As a consequence of the congestion in the Shelter, epidemic diseases have several times given the Inspector and the Matron great worry to know how to prevent all the children in the Shelter becoming affected.

This difficulty has been met by the erection of a small and suitable building, close to the Shelter, which will be used in future as a receiving building, observation ward, and isolation building. This structure has been erected at the moderate cost of about $1,800. It is the first of its kind to be erected by any Children's Aid Society in the Province.

Social Welfare Activities.

This year, like last year, has been marked by an intense activity of all organizations in the municipality which are interested in Welfare and Community Service Work. A very great deal of educational work of a splendid type, as well as real, material help, has been given to the community.

Several outside speakers, each of reputation in some special field of work, have addressed meetings in the town at different times, and under different auspices. The under-privileged child is being especially looked after.

Y. M. C. A.

In August of this year, it was determined to put on a campaign to raise funds to clear the Y.M.C.A. of its indebtedness, as well as to put it in shape to more efficiently carry on that real community service which it has so splendidly undertaken, and is carrying out. Approximately, $15,000 was raised by this campaign. This fund should be sufficient, along with the increasing interest now being taken in the organization to keep the Y.M.C.A. on a solid footing. Over twenty-five organizations, of different community interest, have made use of this organization's building as a centre for their work this past year.

Public Library.

Moved by the spirit of the time, the Public Library Board have increased the service given by the library, both in hours in which it is opened to the public, as well as in number and quality of the books and magazines proffered to the public.

Community Welfare Organization.

The Community Welfare Organization, which came into existence last winter, was reorganized this fall, and has done a very great deal of relief work to alleviate the distress in families of those who have been out of employment. A very great deal of the unemployment problem has been solved in the cleaning up of the Central Park property. This work is now nearing its completion. As an additional means of giving relief to the unemployment, the St. Julien storm sewer was commenced, and is rapidly drawing to its completion.

It is calculated that about $7,000 will be expended in relief work on this sewer.

Schools.

School Attendance.

High (1) (with 1 portable)	151	161	312
Separate (1)	120	98	218
Public (5) (with 2 portables)	933	952	1,885
		Grand Total	2,415

Assessor's Roll (1922) gives children shool age (5-16) 2,485, part school age between (16-21) 847.

At present there are, approximately, 98 boys and 113 girls attending High School who would come under the requirement of the Adolescent Act passed last year.

Schools and Portable Schools.

Three Portable Schools have been erected this year, one at the High School, one at Albert Street Public School, and one on Hillcroft Street. While these buildings may be absolutely necessary to meet the urgent demand for increased school accommodation, they are but a poor make-shift at proper school accommodation. It is greatly to be hoped that no necessity will be found to perpetrate any more of such structures in the municipality, and that some means will be ascertained, this coming year, by means of which to finance the necessary Public and High School increasing accommodation requirements.

Industrial and Vocational Training.

The Industrial Evening Classes which opened November 1st, have been very well received, large classes being attended. There are in attendance for all classes a total of 174 males and 168 females. Mr. Rutherford's report on Vocational and Technical Training has shown the urgent necessity of special accommodation being provided for those students who will be compelled to attend school under the Adolescent Act, and who do not desire to take up Commercial, Teaching or University Preparatory training.

School Nurse.

Miss Sieling, the Public School Nurse, has been doing splendid work, and is producing noticeable results in the pupils under her care. It is to be hoped a similar Nursing Inspection will soon be established in the Separate School. It is very unfortunate that this community service cannot be given to all scholars, no matter what school they attend, and not as at present, only to Public School children.

School Dentist.

Last year the Board of Education appointed a school dentist to look after the Public School children's teeth. A very great demand has been placed on this dentist's time. Very satisfactory work is being done.

School Medical Officer.

It seems to me that the time has now come when a Medical Inspector should be appointed to the schools. The very great assistance which such an official can

give to the scholars, as well as to the School Nurse, if assisted by a thorough system of follow-up work, would be of untold value in improving the physical welfare of the scholars.

Home and School Clubs.

Home and School Clubs have now been established in connection with all the schools. The members are evincing the greatest of interest in all those affairs which pertain to the schools and the scholars. Such organizations will be of very great value in educating the mind of the public along the lines of modern views on school development and education.

Our school children, nearly 2,500 strong, as mentioned above, are the greatest invested potential municipal asset which this town possesses, representing at a very conservative estimate a state valuation of about $5,000,000. Surely we need consider no expense incurred in the erection of new schools for the education of these scholars as *being too great.*

Foreign Speaking Element.

It has appeared to me that we are not doing our duty to the foreign-speaking element, of which we have so many in our midst, nor are we doing what is right by ourselves, when we do not provide some class of school to which foreign-speaking people may attend, after working hours, to learn the English language, both spoken and written. We cannot expect these people to be good Canadian citizens unless we know they can understand us, and we understand them, in a truly Canadian way. Without such education, these people live by themselves, and in ways different to ours, maintaining their old home customs and habits, advancing but little in citizenship, suspicious and distrustful of any advances we may make towards them. We have to wait until the second generation comes along and goes through our schools before we can have any real knowledge of how these people are practising their Canadian citizenship, and shaping their destiny.

Pool-Rooms.

From time to time considerable discussion has arisen as to the granting of license to pool-rooms, and also as to limiting the number in the town to a fixed number.

As it seems to have become an adopted policy of the Municipal Council to license pool-rooms, not limiting the number, looking upon them as business places, it seems to me there are certain facts which should be given deep consideration.

A pool-room license should not be issued, only because the applicant for a license is wanting to operate a pool-room and billiard-hall on an absolutely business basis:— that is for his own personal gain, nor with the underlying notion, which seems to be in the minds of some people, that he is a public benefactor who has been kind enough to open a refuge against inclement weather, where young men may congregate to while away the tedium of hours for which they have no fixed use at that time.

If rest-houses and waiting-halls are necessary in the centre of this municipality, the town itself should provide them as community halls, and as part of a community service, under the competent supervision of a regularly employed municipal employee, male or female, as conditions may require.

The ordinary pool-room, as ordinarily conducted, does not in any way serve to solve the problem of a community rest-house. It is primarily, and above all things, run in a purely business way for gain, and if no satisfactory income were being derived from its operations, the place would soon be closed up.

It is a class of business which, unfortunately, no matter however carefully supervised, offers quiet opportunities for gambling, and the loss of needed capital to those who, oftentimes, can ill afford to lose it, and this occurs quite easily without the owner of the establishment, no matter how conscientious, being able to interfere with the gambling.

I am not an objector to pool-rooms because I believe that a game of pool or billiards, when properly conducted, is not only recreational, but capable of being placed on such a scientific basis as to become highly educative to those who have learned to play such games, and does often offer opportunities of rest from nervous worry, and of putting in of waste time, which help very much in making the day pass, and living worth while.

We must never forget that there is a very large percentage of the population that does not feel inclined to spend all, or much of its spare time, in a public library, concert hall, and so on. To many of these people a game of pool serves the useful purpose of filling in that spare time, particularly at that season of the year when outdoor sports may not be indulged in, and when other recreational facilities are not offered for those hours of the day.

It is the duty of the municipality, however, when once granting a license for the carrying on of any type of business to prove that the operation of that business is not only being carried out in a reputable way, but also along lines which conform to the best business ideals of that type of calling, and the best interests of the municipality.

If one were asked "Do the pool-rooms of Oshawa conform to such best ideals?" one would have to ask "What are those ideals?" The only way in which that question could be answered would be by reference of the question to those who could speak with authority, such as probably the Brunswick-Balke Co., or large properly constituted club organizations which provide facilities for games for their members.

Such questions, as for instance, floor allotment-space per table, lighting of the room, heighth of ceiling, ventilation, necessary seating accommodation for those playing the game, permitted presence, or exclusion, of lookers-on, allowance of conversation, and type of conversation permitted, location of the room, upstairs or down-stairs, freedom from inspection from the street, lavatory accommodation, method of thoroughness of supervision, quality and upkeep of tables and appliances which are used in the game, and several others of like nature could be asked.

From the replies, definite regulations could be made which would be reasonable and capable of being carried out, and would be the municipality's guarantee to the patrons of such institutions that they could receive the greatest amount of personal benefit, with the least amount of discomfort and improper training, which can be obtained from such a method of putting in their time.

I have heard it stated:—

(1) That it is questionable if there is a first-class A.1 table for straight pool in the town, except such as may be in private clubs and houses.

(2) That at present there are only two full-sized English billiard tables, outside of the ones at the Thirty Club and Y.M.C.A., or private club or house, and that these two have been placed in the last two weeks.

(3) That in many cases the tables are in bad repair, with dead cushions.

(4) That no proper supervision of levelling up of the tables is carried out, nor any endeavour to maintain standard height in the tables.

(5) That cues are often in very bad repair, and of poor quality.

(6) That many of the rooms are very poorly ventilated, with no understanding of, nor attempt to procure, what is best lighting for pool and billiard tables.

(7) That the provision for lavatory accommodation could be very much improved.

(8) That many of the tables are too close together to allow ease of play, and proper scientific carrying out of the game.

(9) That in many places non-players are allowed to congregate in the pool-rooms in such numbers as to interfere with the carrying out of the game, and that if chair accommodation is placed for the players this or most of it is occupied by non-players.

Of course, I know that it is an old business saying, "People get what they want." I think it would be better to say, "People often put up with what is provided for them."

Too often the amount of tobacco smoke and noise and unpleasant language is brought to the attention of those who are not users of the pool-rooms, but have, unfortunately, to come in contact with them. Then such people complain.

All these matters which should be considered very carefully by any license committee which assumes, at once, the responsibility of supervision of public morals, when it issues a permit of license to operate a pool-room, or any other gaming hall, whether the members of such committee realize it or not.

Social Service Council.

With all the important and outstanding works in the various fields of Community Service which have been undertaken in the last two years, no attempt has as yet been made to correlate all these energies so as to enlist your sympathies in Social Service work, except of a very limited and transient type. In November, on the 20th of the month, several addresses by prominent members of the executive of the Social Service Council of Ontario, were given in different churches in the town. On November 21st, similar addresses were made to organizations which it was believed would stimulate interest in Social Service work. On the evening of November 21st, in the King St. Methodist Church, a local branch of the Social Service Council of Ontario was brought into being. As yet, the organization locally has not been completed. It is hoped, however, that before the new year this necessary organization for the rounding out of a full field of Community Service will have developed into active operation.

In conclusion, permit me to thank the members of the Board for their unfailing kindness and sympathy exhibited towards the work of the Health Department at all times during the year now past.

Yours truly,

T. W. G. McKay, M.D.,
Medical Officer of Health.

Oshawa, Ont.,
November, 18, 1921.

Dr. T. W. G. McKay,
Medical Officer of Health,
Oshawa, Ont.

Sir:

TABULATIONS OF BIRTHS AND DEATHS.

		In Municipality Outside of Hospital	In Hospital
Total Births	Normal Children	265	115
	Premature	10	10
	Stillborn	14	6
Total Deaths		124	46

Deaths from Malnutrition reported by the Hospital 5

Pre-natal and Natal Causes.	Premature Births		19
	Stillborn		21
	Injury During Birth		1
	Toxæmia following Eclampsia of mother		1
	Acute Septicæmia following G. C. Post Partum Infection of mother		1
	Placenta Prævia		1
	Strangulation		1
	Hydrocephalus		1
	Congenital Malformation of Chest		1
	Congenital Stenosis of the Colon		1
Nutritional Defects.	Marasmus		3
	Malnutrition		2
	General Debility		3
	Senile Decay	1	
	Senility with Inanition	1	
	Senility	5	7
	Natural Causes		2
	Goitre		1
	Diabetes		2
Accidental	Suicide		1
	Accident		1
	Burns and Shock (Sulphuric Acid)		1
	Foreign Body in First Part Duodenum		1
Shock.	Convulsions		1
	Surgical Shock		1
	Surgical Shock with Hæmorrhage		2
	Surgical Shock with Hæmorrhage from the Stomach		1
	Surgical Shock with Rupture of the Bladder		1
Anæmia.	Pernicious Anæmia		1
Cancer.	Cancer of Jaw		1
	Cancer of Face and Neck		1
	Cancer of Breast		1
	Cancer of Stomach		1
	Cirrhosis of Stomach		1
Intestinal Diseases.	Intestinal Obstruction		2
	Intestinal Infection with Marasmus		1
	Gastro Intestinal Infection		1
	Enteritis		1
	Entero-Colitis		1
	Ilio-Colitis		3
	Diarrhœa (Acute)		2
	Cholera Infantum		3
	Appendicitis		3
	Sapræmia from infected food		1
	Peritonitis		3

Liver Diseases.	Abscess of Liver	1
	Catarrhal Jaundice	1
	Infective Cholangitis	1
Kidney Diseases.	Uræmia	2
	Hydronephrosis	1
	Nephritis (Acute)	1
	Nephritis (Chronic)	4
	Nephritis (Chronic with Dropsy)	2
Heart and Vascular Diseases.	Heart Disease	4
Cardiac.	Endocarditis	3
	Endocarditis with Valvular Disease	1
Vascular.	Arterio-Sclerosis	1
	Arterio-Sclerosis and Cerebral Softening	1
	Gangrene	1
	Paralysis	3
	Apoplexy (Cerebral)	3
	Apoplexy and Right Hemiplegia	1
	Apoplexy and Hemiplegia	1
	Right Hemiplegia and Paralysis	1
	Cerebral Hæmorrhage	1
Disease of the Nervous System.	Lateral Sclerosis	1
Questionable Cause.	Seborrhœa	1
	Eczema of Face and Head	1
Respiratory Diseases.	Empyæma	1
	Influenza and Broncho Pneumonia	1
	Broncho Pneumonia	2
	Pneumonia	5
	Terminal Pneumonia	1
Infectious Diseases.	La Grippe	1
Influenza.	Influenza	4
Tuberculosis.	Phthisis	2
	Tuberculosis of the Lungs	6
	Tuberculosis	2
Diphtheria.	Catarrhal Laryngitis?	1
	Tonsilitis (Acute?)	1
	Diphtheria	4
Typhoid Fever.	Typhoid Fever	3
Scarlet Fever.	Scarlet Fever	1
Venereal Disease.	Gonorrhœa (with Septic Infection)	3
Encephalitis.	Encephalitis L.	1
Lethargica.	Encephalitis L. with Intestinal Trouble	1
Meningitis.	Meningitis (Acute)	3
Otitis Media.	Otitis Media	1

I have the honour to submit my report for the year 1921.

Survey.

A general survey of the town has been commenced and is being continued until the exterior and interior of every building has been inspected and the condition of the same recorded. A complete record of all conditions: streets, sidewalks, sewers, water supplies, buildings, together with improvements, is being ascertained with all possible accuracy. These records are necessary for the assistance of the department.

Situation.

The situation of the town of Oshawa, with regard to the township of East Whitby, is one that requires consideration. The township bordering on our west at Park Road, and south, the Base Line and Cedardale, is gradually becoming a suburb of no mean proportions. Distance is lacking whereby a safeguarding border line might exist. Our municipal laws are enforced on our side of the streets, yet there is no one to supervise, or see that similar laws are carried out on the East Whitby side. This not only prevents adequate protection against communicable diseases, but creates dissatisfaction among the citizens on our side of the street. Nuisances are abated on the town side but in a great number of cases are not interfered with on the township side. An early annexation of Cedardale and of a part of the township west of Park Road is the best remedy for coping with these conditions. Also, the annexation of these parts of the township will more readily insure the construction of that badly-needed utility, a sanitary sewer for Westmount and Cedardale. In making this survey the whole boundary inclosing the 8½ square miles, designated as Oshawa, has been covered as well as observations made of the adjacent surroundings.

Streets.

Our town plan shows 171 streets. There are actually 117 laid out, with a mileage of approximately 53 miles. Of these, eight miles are paved. The most noteworthy improvement this year has been the construction of the bridge on, and the paving of King St. W. The unsightly entry to the town, via the main highway, has long been an eye-sore to the citizens of Oshawa, and they may be congratulated that in a few weeks this bridge will be completed, and the entrance to the town from the west will have been much improved. Oshawa has now completed over fifty miles of sidewalks, this amount having been reached by an additional two and three-quarter miles this year.

Public Parks.

By the addition of Lakeview Park (that splendid gift from General Motors, Ltd., of Canada) the town now possesses 33½ acres of playground and recreation space. The great number of persons to be seen at all times during the summer season at Lakeview Park expresses the public appreciation of that gift.

Although we lack a public swimming pool, handy to the town, much use, for this purpose is made of the creek west of the town, from south of the golf links to a few hundred feet north of King St. bridge. A walk round here during the summer months, will show that citizens of all ages bathe frequently in this narrow, shallow strip of water. Part of this creek and the lowland surrounding it, which one may venture to say, will never be used for building purposes, might, at some future date, be procured as a small park or playground for the people of the north-west and west side of the town. With a very little work, a fairly satisfactory swimming pool could be constructed. Its value in allowing children to learn to swim would repay for its fitting up, leave alone the pleasure it would confer on the young children of the north part of the town.

Another year should not be allowed to pass without every effort being made whereby proper, sanitary lavatory accommodation may be placed in Alexandra and Lakeview Parks. The old wooden privy has long ceased to have its day.

The greater portion of the people in both town and country now adopt a sanitary convenience, other than the old wooden privy. This year we have heard a lot about the unsanitary condition of the toilets in Alexandra Park, yet these toilets were no worse in condition than they have been in previous years. It is the people who have changed. They have begun to realize that unsanitary conditions should no longer be tolerated. Even though it becomes an additional public expense, all conveniences for the public use should be good and sanitary. We have no legal right to insist upon the provision of up-to-date toilet in either of these parks, or we would have enforced it a year ago. In asking for it, we have, however, a right to appeal to the sense of decency and rights of the citizens.

Sewers.

We have now over seventeen miles of sanitary sewers in the town of Oshawa, one-quarter of a mile having been added this year. The completion of the trunk storm sewer from Ritson Road, via Olive Ave., Court St. and Albert St., as far as Bruce St., the distance of about one mile, brings the total to over seven miles of storm sewer. This recent construction is the most important addition which has been made in the sewer system.

At the time of the original laying of the storm and sanitary sewers in the town, which ran diagonally across to the Ritson Road where the present out-fall is, an old box drain was made use of as the out-fall for the storm sewers which drained to the south-east. It was thoroughly understood at that time that at some future date the use of this box drain would have to be discontinued, and a properly constructed main out-fall sewer installed. Prohibitive cost withheld the initial building, and delayed any question of construction until threatened claims for damages for repeated flooding of cellars in the centre and south-east sections of the town forced action to be taken. As recommended by Messrs. Gore, Nasmith and Storrie, at a time when labour and material was at a peak price, this sewer was to have cost $95,000. Some alteration in the proposed course of this sewer shortened its length for some hundred feet. The construction was also carried out without what might be called highly technical and skilled labour. The consulting Engineers and their assistants were not in daily supervision of the work as it proceeded, it having been decided to proceed with the laying of this sewer with purely local labour as much as possible, the idea apparently having been that the elimination of specially trained pipe layers and technical engineers in the field work would produce a material reduction in cost. The local Municipal Engineer, in his multifarious duties, had to depend upon the assistance provided him. The town has been congratulated on the fact that the construction cost of this main out-fall sewer at completion was $20,000 less than the estimated cost given by the Consulting Engineers. This has, of course, been materially influenced by the fact that a rapidly falling market for materials and labour was favourable to the town, being as it is one of the most important parts of our sewerage system, it is sincerely to be hoped that a reduction in cost of such a material amount, as has been indicated, will be accompanied by the proof, as time goes along, that the town lost nothing by its determination to carry the work through without this special outside help and advice spoken of above.

Water Mains.

Our 25½ miles of water mains have been greatly improved this year by the addition of an 18-inch force main running parallel to the old 12-inch force main

from the pumping station at the lake to Albert St. at a cost of $142,300. This will give ample protection if a break should appear in the main. The daily water service averages fifty-seven gallons per individual. The new 30-inch intake has been laid and completed this year, and is a great advantage over the old intake. The new 30-inch intake extends about 2,700 feet out into the lake, and is at its outer end at a depth of thirty-five feet, which is sufficient for it to be comparatively uninfluenced by turmoil in the surface waters in time of storm. The cost of this new intake was $94,530. The total cost of the additional construction work executed by the Water Commission this year, including new pumping machinery, meters, well screens, and connections, slightly exceeded $278,000. We are glad to feel that we have now a safe water supply, both filtered and chlorinated. The absence of typhoid fever, and other water-borne diseases from our municipality, proves that money spent upon a safe and adequate water supply is not to be regretted. Water samples taken during the year to the number of 106 show a continuously good supply free from contamination.

Four wells have been condemned during the year owing to intestinal sicknesses having become present in the inhabitants of dwellings making use of this supply. Samples taken of the water showed the presence of colon bacilli. These wells were at once ordered closed and connections to the town water main ordered to be immediately installed.

Buildings.

Noticeable this year is the reconstruction of buildings upon the man street (Simcoe Street). The alterations very much improve the appearance of the town. There are over 2,600 buildings in the town of Oshawa, ranging in value from a few hundred dollars upwards. The necessity for a Building By-Law remains evident, and becomes more insistent as each new application for a building permit is made. Poor workmanship, and poor principle of construction, has many times been observed, yet when covered with lath and plaster, paper or paint, the defects are not seen. Nevertheless, they exist, to the detriment of occupiers, or future purchasers. Poor workmanship and construction should not be encouraged in this town of Oshawa, where we have so many first-class mechanics in all branches of the building trades, who are only too willing to work under the strictest supervision, having that pride in their work which led them to choose their respective trades as their ideal means of livlihood. From a public health point of view, the most important buildings constructed this year are the Isolation Building at the Children's Shelter, and the addition to the Nurses' Home. Both of these constructions were badly needed.

Plumbing.

Ninety plumbing permits were issued this year, each calling for from one, to in some cases nine visits of inspection. Three hundred visits, all told, have been made in inspecting plumbing systems. We must express our appreciation of the work executed by the Oshawa plumbers. We find them willing at all times to do what is right. We are sure that the most pleasant feeling exists between master plumbers, journeymen plumbers, and your Inspector.

FOOD.

Milk.

Six licensed dealers are supplying milk in the town of Oshawa, the milk being obtained from producers whose farms are located within a sixty square mile area surrounding the town of Oshawa.

All local dairies are regularly inspected, and 43 milk samples have been taken during the year. The results of the analyses show these samples to have the required amount of butter fat 3.25 per cent. Five farms have been visited from which the milk is produced and supplied to local dairies, and have been found to be fairly satisfactory. Suggestions for improvements were made and carried out: other improvements are anticipated when financial conditions will permit.

Four licenses were refused, the applicants having premises of such an unsanitary character that they could not be allowed to peddle milk to the public. Two prosecutions were made and small fines imposed to prevent the peddling of milk from unsanitary premises.

Ice Cream.

A large number of ice cream peddlers operated from wagons before this department became aware of their existence. Upon discovery, written instructions were given each one, insisting that the ice cream be peddled direct from the store at which it was purchased and all left over ice cream to be returned there. Under no circumstances, was ice cream permitted to be taken to the houses of the peddlers. We are prepared for this business next year, and will have it well in hand before licenses are issued.

Bakeries.

Bakeries and bakers' wagons have been inspected. Instructions to wash and clean delivery wagons have been issued in two cases.

Butcher Shops.

All butcher shops have been inspected and meat supply supervised as far as shop supervision can be carried out. The only effective manner of inspection is to have a public abbatoir, where all beasts may be inspected before and after slaughter by a competent veterinary surgeon.

The rending of fats and making of headcheese in some of the stores has caused complaints to be laid. These complaints have been investigated and suggestions made whereby the odour from the cooking may be carried off satisfactorily. As this is part of the business of most butchers, we hesitate to take drastic measures to prevent repetitions of these, which, after all, are not serious nuisances. We have hopes that, in time, alterations of the premises will insure a proper place and method for carrying on this part of the business without interference with the comforts and rights of neighbours.

Fish.

There has been an increase this year in the number of fish hawkers. The disposal of waste matter from this business has called for several investigations, which, upon suggestion, have been satisfactorily rectified.

General Stores.

General stores, particularly round the poorer districts, have frequently been inspected, and eatables which were not in fit condition to be consumed as food were seized and destroyed. Lack of a sufficiently extensive business, and just how to order goods is, we have found, responsible for this. The stock gets old; in the case of meats, it begins to decompose. Other foodstuffs get damp and musty through improper storage. It is felt that the loss of the goods is sufficient warning, therefore prosecutions are not entertained.

Communicable Diseases.

The total number of communicable diseases for the year is 439. Of these, only 166 came under the notice of your Inspector for his action, they being the placardable diseases. Upon the report of any of these cases, the house is placarded, and instructions given as to quarantine. At the termination of the disease, the fumigation of a room, or rooms, or, in some cases, the whole house takes place, and the placard is removed. The number of rooms fumigated this year amount to 396, the fumigator used being formaldehyde gas for rooms, and bi-chloride and hydrochloric acid for linens, washable articles, floors, furniture, and baseboards.

Garbage.

The collection of garbage by the contractor for this year has been most satisfactory. Complaints, compared with previous years, have been almost negligible. Collections are made regularly, in a cleanly manner, and with due civility on the part of the garbage collector. The covering of the wagons with tarpaulin has proved to be a decided improvement, eliminating the blowing about of dust from the collecting wagons.

Schools.

All schools have been inspected and separate reports submitted.

Inspections.

Total number of inspections regarding nuisances of various kinds 1,493.

Inspections.

Water samples taken—Town Water	106	
Wells	9	
Milk samples taken	42	
Plumbing installations	90	Inspections 303
Communicable diseases placarded	166	
Fumigated rooms	396	

In concluding this report, I desire to express appreciation of the services rendered by the Public Health Nurses, and Miss Minaker, the Department stenographer. One would expect that added help would lessen the work, but such is not the case, for the increase in calls for work to be done by the officials of the Department has steadily grown apace. Under your able command, and untiring energies, the members of the Department are meeting all possible branches of public health work, many of which would, were it not for the Nurses and the stenographer, have to be ignored altogether.

It is gratifying to be able to state that it means long hours, and hard work, to answer the many calls that come from the public for our assistance. This leaves no doubt about the thoughts of the public concerning the work of the Department.

All of which is respectfully submitted,

FRED C. PALMER,
Sanitary Inspector.

Oshawa, Ont.,

November 10, 1921.

Dr. T. W. G. McKay, Medical Officer of Health, Oshawa, Ont.

Dear Sir:

From November 1, 1920, to October 31, 1921, my annual report of the Nursing Service of Public Health is herewith submitted.

As the communicable diseases have figured largely in the early part of the year, the following shows the number of each disease reported for the year:—

Chickenpox	110	
Diphtheria	70	6 deaths
Diphtheria "Carriers"	64	
Mumps	64	
Whooping Cough	51	
Tuberculosis	23	5 deaths
Scarlet Fever	22	1 death
Influenza	8	
Erysipelas	7	1 death
Smallpox	7	
Typhoid Fever	6	
Measles	3	
Meningitis	3	1 death
Impetigo	1	
Total	439	

Each contagious case has been visited and isolation made as complete as possible. The member of the household who is caring for the patient is advised along lines of quarantine, personal hygiene, general health conditions, and prevention of disease. The wage-earners are permitted to continue their duties as usual, providing they are honest with themselves, their family, and us in helping with our work of quarantine and protection of the public. With very few exceptions, individuals and families have gladly received and adopted principles of public health, realizing that it is their duty to each other, and to the community. This year we have not experienced so much difficulty in crowded housing conditions, thus making our duties lighter in communicable diseases.

Preventive medicine has demonstrated its great and lasting value in connection with diphtheria. Without the keen co-operation of the doctors in administering antitoxin to all contacts in the home, and to "carriers" of diphtheria, stamping out of this disease would have been impossible in so short a time. As diphtheria has been prevalent early in the year, and again this fall, every precaution has been taken to trace the source of the spread. More and more we have come to consider the individual himself, and to try to teach him to maintain health, to avoid infection, and which constitutes hygienic living. The mortality rate from diphtheria in the year is six, though three cases were moribund when medical assistance was called. Through education, people are beginning to realize that a throat infection is not a matter to be trifled with, and to be on the safe side by calling for medical advice early.

The reports of measles, whooping cough, mumps and influenza, do not, to any degree, indicate the prevalence of the disease.

The Child Welfare Clinics have been hubs of activity each week throughout the year, and a great deal of intensive work has been given this branch of public health. It does not take long to see results. The reduction of the infant death

rate from intestinal causes is one of the greatest indications that this work is most essential and proof that we have obtained results. Mothers bring their babies very frequently to the Clinic for weighings and advice regarding feedings, clothing, child hygiene, and it is particularly gratifying to have the young mother with her first babe—always interested in getting the knowledge whereby her baby will grow to be a perfect type of manhood or womanhood. Where physical defects, such as tonsils and adenoids, are found, eye and ear defects hernia and cases of illness are all referred to the family physician. Many physical ailments have been immediately remedied by the physician, particularly tonsils and adenoids.

In connection with child welfare many calls have been received from mothers outside of Clinic attendance, and from the medical profession for cases where a baby is suffering from intestinal infection. Here treatment is prescribed by the doctor and formula adjusted. Much educative work and bedside care is given in this way; a large number of cases require daily visits for treatment, and invariably intensive work will last a week to ten days on one case.

The Clinic opened for the non-English speaking mothers in May and has been well attended. Possibly the social and advisory influences given at this Clinic will have a more far-reaching effect than the primary intention of the well baby Clinic.

The stations registered for birth and mortality rate of infants is as follows:—

	1921
Deaths registered under 1 year	
Intestinal	18
Premature	20
Stillborn	20
Other Causes	14
	72

Births registered 420.

Modern medical teaching indicates that under proper care a very great number of these little lives might have been saved.

We are much gratified upon the report of the considerable decrease of infant mortality from intestinal infection. The doctors have co-operated in all cases possible, for under their directions treatments have been given, formulæ prepared, and general care carried out, demonstrating the value of education in the care of infants. No doubt the Child Welfare Clinics throughout the year have done much to stimulate health work, and indicate the great need of general teaching of infant nutrition and child hygiene.

The appalling rate for stillborn and premature children shows the great necessity for the prenatal care of the mother. This we have attempted in a small way this year, and next year intend to give a generous portion of our time to reducing these unbelievable figures.

Tuberculosis is a problem. We have been in touch with twenty-three cases during the year, six of whom are in sanitoria at the present time. It does not seem an easy task to get in contact with cases in the early stages. Every community has its tuberculous suspects, and we may well expect that this group and incipient cases exceed in number the active cases. A great deal might be done when people realize that their return to health is a matter of concern and interest to health organizations doing their bit in that direction.

The local Red Cross Society has co-operated with our department in many activities throughout the year, thus carrying out their peace-time policy of "Improvement of health, prevention of disease, and mitigation of suffering." Through

the stress of times and circumstances all last winter the Red Cross supplied in homes where there was illness and distress, bedding, linen, pneumonia jackets, and nourishment such as soups, custards and eggs. No one can estimate the value of this, coming as it did in need and sickness. Added to this was the equipment for a baby Clinic among the non-English speaking population. By the magnificent generosity of the President of the Society, the position of an Assistant Public Health Nurse was made possible, thus extending our activities along prenatal and bedside care, and thus carrying out the policy of the Red Cross organization.

3,203 visits have been made during the year. This includes calls for all branches of public health work. Bedside care has been given all cases referred to us in this municipality by physicians, by families, or when we have seen the necessity in the home. This practical daily demonstration is of educational value to members of the household. This indicates what vocational training will do for home makers.

Respectfully submitted,

B. E. Harris. *R.N.*
Public Health Nurse.

OTTAWA

Chairman and Members, Board of Health, Ottawa.

GENTLEMEN.—I have the honour to present the following report of the work of the Health Department for the year 1921:—

POPULATION, (Assessor's Census)	113,000.	
BIRTHS REGISTERED	3,317.	
Still Births	161.	
Live Births	3,156.	
Birth Rate	29.35	
LIVE BIRTH RATE	27.93	
DEATHS REGISTERED	1,775.	
Deaths excluding Still Births	1,614.	(in 1920)
CORRECTED DEATH RATE, excluding 211 non-city cases	12.416	(14.96)
Gross Death Rate	15.70	(18.92)
Death Rate excluding Still Births	14.28	(17.64)
Infant Deaths under 1 Year	439.	
Infant Deaths under 6 months	328.	
INFANT DEATH RATE, per 1000 Live Births	139.10	

COMMUNICABLE DISEASES.

Small-pox, has been the outstanding feature in connection with contagious disease during the past year. The epidemic, which started in October 1920, spread rapidly through the unvaccinated population, increasing throughout November and December and reaching its maximum about the first week of January 1921. The number of cases remained high during February and March, began to decrease in April and May, showed a marked decline in June, and by August Small-pox had ceased to be epidemic although a few cases were still reported.

At first an attempt was made to hospitalize all cases but the Hopewell Hospital on Porter's Island was soon filled to its capacity and the Board of Health wisely refused to attempt caring for patients in tents or temporary shacks in the middle of winter. It was therefore necessary to quarantine a certain number of the cases at home and reserve the hospital accommodation for the more serious cases and for those cases whose removal to hospital would obviate or shorten the quarantine of a house. Altogether 1352 cases were reported during the year, of which number 949 were treated in the Hopewell Hospital. The maximum number of patients in the Hospital on any day was 84 and the minimum one. The total number of nursing days was 13,503. The average stay per patient was 14.2 days. The cost per day per patient was $1.76. As this is the first time that the Hopewell Hospital has been called upon to meet the requirments of an extensive epidemic it may be well to mention that it proved to be a very satisfactory building, easy to heat, economical to operate, and adequate for the accommodation of 60 patients. It was for a time during the epidemic distinctly over-crowded in our attempt to hospitalize all cases. As soon as it was realized that all cases could not be hospitalized the number of inmates was limited to the capacity of the Hospital without overcrowding. One defect in the Hospital is the very limited accommodation for nurses and help.

The majority of cases during the epidemic were of a mild character, some being so slight as to be difficult of diagnosis, but there was also a considerable number of semi-confluent and a few definitely confluent cases, while two of the four fatal cases were hæmorrhagic.

Out of 587 consecutive cases admitted to the Hopewell Hospital during this epidemic and of which the vaccinations were noted, only nineteen showed marks of

previous successful vaccinations. The length of time that had elapsed between the vaccinations and the attacks of small-pox was as follows:—

Less than 10 years	0
10-15 years	3
15-20 years	3
20-25 years	4
25-30 years	3
Over 30 years	6

These cases can be fairly taken as representative of the whole epidemic and it is evident that only 3.23% of the cases of small-pox showed evidence of previous vaccination and none within 10 years.

Three cases of second attacks of small-pox were noted, two of these showing definite pitting from the first attack. These two had suffered from the first attack in youth, more than 30 years ago. The other case had a physician's certificate to the effect that the patient had suffered from Small-pox 5 years previously but the patient showed no evidence of a previous attack.

During the epidemic the City made provision for free vaccination of any who desired to avail themselves of the opportunity. Ten physicians in different parts of the City were employed as public vaccinators. More than 20,000 vaccine points were issued by the Health Department during the year and several thousand during the latter part of the proceeding year at the outbreak of the epidemic. The vaccine used was that supplied by the Provincial Board of Health. This proved very satisfactory, showing about 90% of successful takes and no serious results were reported. Unfortunately, owing to the agitation against vaccination and the impossibility of getting a compulsory vaccination order passed, there still remains a large unvaccinated population in the City even after 14 months of Small-pox, and it is improbable that the City will be free from the disease for a considerable time.

Measles has been almost absent throughout the year, only 82 cases and no deaths having been reported.

Whooping Cough. This disease has been more prevalent than last year but apparently much less fatal, causing only 14 deaths out of 390 cases as compared with 33 deaths in 297 cases during 1920. The large number of cases of pertussis reported during the last two year as compared with previous years is undoubtedly the result of the activities of the district nurses since the majority of these cases are not seen by a physician.

Tuberculosis again shows a decrease as demonstrated in attached statistics.

TUBERCULOSIS 1921.

Month	Cases Reported	Deaths from Pulmonary Tuberculosis	Deaths from Other Forms of Tuberculosis
November	12	7	1
December	10	5	2
January	5	5	2
February	12	7	1
March	9	10	3
April	14	5	3
May	10	7	1
June	4	3	3
July	12	12	1
August	8	10	7
September	11	9	1
October	8	4	0
Totals	115	84	25

This shows a decrease from the preceding year both in the number of cases of Tuberculosis reported and in the number of deaths. The death rate for Tuberculosis, all forms, is 9.64 per 10,000 population as compared with a rate of 10.29 for 1920, which was the lowest rate previously recorded for Ottawa.

Tuberculosis caused this year 6.75% of the total deaths.

Scarlet Fever has been less prevalent than last year, 308 cases with 9 deaths having been reported as against 546 with 17 deaths the year before. 89% of the reported cases were treated in the Isolation Hospital.

Diphtheria again shows an increase, 580 cases reported compared with 522 the year before. The mortality, however, has been somewhat lower, 43 deaths compared with 52 in 1920; a mortality of 7.4% instead of 10% as in 1920. Futher information on Diphtheria and Scarlet Fever will be found in the report of the Superintendent of the Isolation Hospital.

Typhoid Fever has been almost absent from the City—only three cases originating in Ottawa having been reported, although a number from outside municipalities have been treated in the Hospitals of this City.

TYPHOID FEVER

Origin	Cases Reported	Deaths
Ottawa	3	2
Northern Ontario	5	3
Other points in Ontario	14	1
Province of Quebec	6	2
Totals	28	8

Influenza, Cerebro-Spinal Meningitis, Poliomyelitis, and Lethargic Encephalitis have been practically absent, although 6 cases of the last named with no deaths were reported.

Venereal Disease has been better reported this year, a total of 276 being registered as compared with 167 last year. It is not probable that this means any marked increase in the prevalence of these diseases but merely a somewhat better report. There is no doubt that 276 does not by any means indicate the number of such cases in the City.

A free Clinic for the treatment of Venereal Disease has been established at Water Street Hospital under arrangements with the Provincial Board of Health. The Clinic opened June 20th, 1921, with Dr. DeHaitre as the specialist in charge and one nurse supplied by the City. This Clinic has proved a great advantage to the City as it permits those unable to pay for private treatment to obtain the services of a specialist and expensive drugs without charge.

INFANT MORTALITY.

This year has been marked by a substantial reduction in infant deaths so that, even with the diminished number of births, the Infant Mortality Rate has fallen from 162 to 139.1 per 1000 live births.

In 1920 there were 573 deaths of infants under 1 year of age whereas in 1921 there were 439, a saving of 134 lives. If the deaths of non-City cases were excluded the corrected Infant Mortality Rate would be 121.0.

The principal causes of infant mortality are shown in the following table:—

Disease	Under 6 Months	6 Months to 1 Year	Total
Congenital Debility	42	4	46
Prematurity	70	1	71
Marasmus and Inanition	32	3	35
Congenital Malformation	29	4	33
Other diseases of early infancy	20	6	26
Diarrhoea and Enteritis	65	38	103
Respiratory Diseases	28	21	49
Contagious Diseases	13	11	24

These figures show that 40% of the deaths were those of non-viable infants—the majority of these surviving only a few days or hours.

There is, however, an increase in the percentage of deaths from diarrhoeal disease which this year caused one quarter of all the deaths under one year of

age. 70% of these occurred during the months of July, August and September.

The deaths from contagious disease among infants show a great reduction owing to the absence of measles and the lessened virulence of whooping cough.

I believe that the increased number of district nurses and the increasing attendance at the Baby Welfare Stations have had some affect in making the 1921 Infant Death Rate the lowest yet recorded for Ottawa.

I wish to repeat three recommendations made in my last annual report and which, while approved by the Board of Health, were not acted on for financial reasons.

1. The appointment of physicians as part-time medical inspectors of schools.
2. The establishment of a School Dental Clinic.
3. The provision of accommodation for incurable cases of cancer.

I wish to thank the members of the Board of Health for their co-operation throughout the year.

Tables of vital statistics and the reports of the different sub-departments are appended.

All of which is respectfully submitted.

Medical Officer of Health.
T. A. LOMER

COMMUNICABLE DISEASES REPORTED FOR 1921

Diseases	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug.	Sept	Oct	Totals	D'hs
Tuberculosis, (Pulmonary)	12	10	5	12	9	14	10	4	12	8	11	8	115	84
Typhoid Fever	6	4	....	....	....	3	....	1	1	5	5	3	28	8
Scarlet Fever	22	37	34	31	35	25	19	17	5	6	34	43	308	9
Diphtheria	90	45	64	63	49	32	31	17	23	19	70	77	580	43
Smallpox	168	203	310	174	185	120	89	42	25	6	24	7	1,352	4
Measles	7	11	19	18	20	2	2	2	....	....	....	1	82	0
German Measles	1	....	....	1	2	....	....	1	....	....	....	1	6	0
Chickenpox	19	31	45	43	14	20	29	63	15	9	2	9	299	1
Mumps	7	2	5	5	10	5	4	5	....	....	4	34	81	0
Whooping Cough	7	34	45	35	28	27	43	41	49	42	26	13	390	14
Erysipelas	....	1	....	1	4	....	1	....	....	....	....	....	7	3
Cerebro-spinal Meningitis	....	....	1	....	....	....	....	....	....	....	....	....	5	1
Influenza	....	....	1	....	....	....	....	....	....	....	....	....	1	5
Lethargica Encephalitis	....	....	1	2	2	....	....	....	....	....	1	....	6	....
Total	339	378	430	385	358	248	228	193	130	94	177	196	3,256	172

BIRTHS BY WARDS, INCLUDING STILL BIRTHS

Diseases	Nov	Dec	Jan	Feb	Mar	Apr.	May	Jun	July	Aug	Sept	Oct	Total
Rideau	7	10	9	9	7	5	5	5	8	5	11	9	90
Ottawa	10	12	20	20	17	18	20	26	21	20	22	24	230
By	19	21	20	20	18	21	15	22	18	18	27	26	245
St. George	33	20	23	31	33	29	25	41	25	25	36	20	341
Central	34	20	23	24	43	26	21	20	23	20	30	24	308
Wellington	28	11	23	20	15	25	45	36	20	18	15	25	281
Dalhousie	79	56	108	77	86	84	70	69	86	75	85	68	943
Capital	28	25	28	40	25	24	44	27	25	24	21	25	336
Victoria	25	17	15	9	22	23	31	35	23	16	9	17	242
Outside Cases	23	26	16	24	29	33	18	31	21	26	23	31	301
Total	286	218	285	274	295	288	294	312	270	247	279	269	3,317

DEATHS ACCORDING TO AGES

Ages	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug.	Sep	Oct	Totals
Under 6 months	31	25	20	29	31	34	22	11	30	42	28	25	328
6 mos. to 1 year	6	8	9	7	13	6	7	7	11	20	10	7	111
1–2 years	3	3	2	4	5	5	3	4	3	6	3	5	46
2–5 years	2	1	6	5	4	3	3	3	1	3	9	2	42
5–10 years	4	6	6	7	4	4	9	3	9	7	6	3	68
10–15 years	2	1	1	3	1	1	3	5	1	4	3	3	28
15–20 years	3	2	2	2	7	2	3	2	4	6	4	2	39
20–25 years	2	4	4	4	4	6	6	4	6	4	1	4	49
25–30 years	2	3	6	4	2	5	1	2	2	4	8	....	39
30–35 years	6	5	4	5	5	....	6	5	2	4	8	1	52
35–40 yeaars	6	4	8	3	5	4	4	4	4	6	4	2	54
40–45 years	1	4	10	1	3	5	3	1	7	4	9	4	52
45–50 years	8	5	6	8	6	8	2	3	5	3	9	6	69
50–55 years	3	7	5	7	3	7	6	3	6	6	10	6	69
55–60 years	7	9	5	6	10	9	8	3	7	9	7	8	83
60–65 years	9	10	7	8	13	8	7	10	8	4	6	7	97
65–70 years	11	8	11	12	7	7	11	3	2	5	3	3	88
70–75 years	7	9	12	9	15	6	8	6	7	10	9	9	107
07–80 years	4	11	11	5	7	6	9	4	6	4	2	3	72
85–90 years	6	9	7	7	4	2	6	6	8	10	7	10	92
90 years and up	2	3	2	3	2	2	1	....	....	3	5	1	24
Totals	125	137	144	139	161	130	128	95	129	164	151	111	1,614
Stillborns	16	7	12	16	13	17	17	15	10	10	15	12	161
Totals	141	144	156	155	174	147	146	110	139	174	166	123	1,775

DEATHS, INCLUDING STILLBIRTHS, ACCORDING TO NATIONALITY
NOV. 1, 1920—OCT. 31, 1921.

Canadian	1579
English	66
Irish	51
Scotch	24
German	8
Austrian	1
American	23
French	3
Russian	6
Italian	7
Other Nationalities	7
Total	1775

DEATHS AT INSTITUTIONS FROM NOV. 1, 1920, TO OCT. 31, 1921.

Institutions	Total Deaths	Deaths of Non-residents
D. D. G. P. Hospital	106	54
St. Luke's Hospital	74	13
Water St. Hospital	216	104
Misericordia Hospital	82	17
Dr. Hagar's Hospital	9	1
Ottawa Maternity Hospital	21	3
Salvation Army Rescue Home	3	0
Hopewell Hospital	4	2
Isolation Hospital	49	3
Lady Grey Hospital	32	3
St. Patrick's Home	12	4
St. Charles' Home	27	7
Old Men's Home	2	0
Perley Home	6	0
Protestant Infants' Home	5	0
Total	648	211

VITAL STATISTICS FROM NOVEMBER

Disease	1920		1921													
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Under 6 mos.	6 mos. to 1 yr.	1-2
1. Typhoid Fever	2	1	1	...	...	...	1	...	1	...	2	...	...	...	...
5. Smallpox	...	1	1	1	...	...	1	...	...	...	...	...	1	...	...
7. Scarlet Fever	...	3	1	1	2	...	1	...	...	...	1	...	1	1	1
8. Whooping Cough	...	1	2	1	1	3	...	2	2	...	1	1	3	6	4
9. Diphtheria	5	3	4	7	4	4	3	...	...	4	5	4	1	3	5
10. Influenza	...	...	...	1	...	...	2	...	...	...	...	2	...	...	...
14. Dysentery	...	...	...	...	...	...	...	...	...	...	2	2	2	...	...
18. Erysipelas	...	...	...	...	1	1	...	1	...	...	...	...	2	...	...
19. Other epidemic diseases	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
20. Septicaemia	...	1	5	2	1	3	1	3	1	2	2	...	3	...	1
22. Anthrax	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
24. Tetanus	...	...	...	...	2	...	...	...	...	1	1	...	...	...	...
28. Tuberculosis of the lungs	7	5	5	7	10	5	7	3	12	10	9	4	...	1	...
29. Acute Miliary Tuberculosis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
30. Tuberculosis Meningitis	...	...	1	1	3	1	...	1	1	4	1	...	...	1	2
31. Abdominal Tuberculosis	1	1	...	...	...	1	...	2	...	2	...	...	...	...	...
32. Potts disease	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
34. Tuberculosis of other organs	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...
35. Disseminated Tuberculosis	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
36. Rickets	...	...	...	1	...	...	...	...	1	...	...	...	1	1	...
37. Syphilis	1	1	1	1	1	1	2	2	1	...	2	1	8	2	2
39. Cancer of the buccal cavity	2	1	1	...	...	...	1	...	...	...	...	...	...	...	...
40. Cancer of stomach and liver	2	1	1	1	3	2	...	2	3	1	3	4	...	...	...
Cancer of the bladder	...	1	3	1	...	...	...	...	...	...	...	...	...	...	...
41. Cancer of the Peritoneum., intestines, rectum	1	2	...	2	1	...	3	1	...	4	2	2	...	...	...
42. Cancer of the female genital organs	1	...	...	1	2	2	...	1	1	2	...	...	...	...	...
Cancer of Uterus	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
43. Cancer of the Breast	...	1	...	1	1	...	...	...	...	...	1	2	...	...	...
44. Cancer of the Skin	1	...	1	...	1	...	...	...	...	...	1	...	...	...	...
45. Cancer of other or unspecified organs	...	1	5	...	1	2	1	...	4	...	2	2	...	...	1
46. Other tumors, (female genital organs excepted)	2	...	...	...	1	1	...	...	...	1	1	...	...	...	1
47. Acute articular rheumatism	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...
48. Chronic rheumatism and gout	...	...	...	1	...	1	...	1	2	...	...	...	...	...	...
50. Diabetes	2	3	...	1	...	3	2	...	...	...	2	...	...	...	...
51. Exophthalmic goitre	...	...	...	...	1	1	1	...	...	...	...	2	...	...	...
53. Leukaemia	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
54. Pernicious Anaemia	1	2	1	1	3	2	3	1	...	4	1	2	...	1	...
55. Other general diseases	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
56. Chronic or acute alcoholism	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...
58. Other chronic poisonings	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
2. Diseases of the Nervous System															
60. Encephalitis	...	...	1	...	1	...	...	...	...	1	...	1	...	1	...
61. Meningitis	...	1	1	2	...	...	...	...	1	1	...	...	...	...	1
Cerebrospinal fever or Epidemic meningitis	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Simple meningitis	...	1	1	1	3	1	1	...	...	...	...	...	1	1	1
63. Other diseases of the spinal cord	...	2	...	...	...	1	...	...	...	...	...	1	...	...	...
Paralysis agitans	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...
Primary lateral sclerosis of spinal cord	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
64. Cerebral haemorrhage, apoplexy	6	5	8	6	9	5	6	6	3	4	5	5	...	...	...

1, 1920 to OCTOBER 31, 1921

2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-90	90 up	Totals
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3	2	....	....	2	2	....	....	....	....	1	....	....	....	....	....	....	....	17
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VITAL STATISTICS FROM NOVEMBER

Disease	1920		1921												
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Under 6 mos.	6 mos. to 1 yr.	1-2
65. Softening of Brain			1												
66. Paralysis without specified cause					1		2				1				
67. General paralysis of the insane	1			1											
69. Epilepsy	2														
70. Convulsions (nonpuerperal)			1												
71. Convulsions of Infants		4	1		3	3			1	2			7	4	3
73. Neuralgia and Neuritis				1											
74. Other diseases of the nervous system					1										
76. Diseases of Ears						1	3							1	
3 Diseases of the Circulatory System															
78. Acute Endocarditis		3		3	2	1	2	1	2						
79. Other organic diseases of the heart	3	1	4	2		3	2	4	1	2	2	1	1		
Chronic valvular disease	1		1			1	1	3	4	3	1				
Aortic insufficiency						1									
Chronic Endocarditis	1		3	5	5	2		4	1	4	4	5			
Myocarditis	3	8	7	7	7	3	5	2	4	4	3	6			
80. Angina pectoris							1			1	1				
81. Diseases of the arteries	3	1	3	2	3	1	1	2	2	1		1			
Arterio Sclerosis	4	2		2	4	2	1	2	2		3	3			
82. Embolism and thrombosis			2	1	1				1	1	1	1			
83. Diseases of the veins						1									
85. Haemorrhage, other diseases										1					
4 Diseases of the Respiratory System															
87. Diseases of the larynx		1		1									2		
89. Acute Bronchitis					3							2	1	2	
90. Chronic Bronchitis			1		1	1			1			1			
91. Broncho-pneumonia	4	3	5	4	7	2	4	2		2	4	4	10	13	4
92. Pneumonia	5	11	9	5	9	9	8	8		2	1	7	12	6	2
93. Pleurisy		1	1					1	2						
94. Pulmonary Congestion				1					1	1	1	1	2		
95. Gangrene or abscess of lung			1								1				
96. Asthma	1		1							1					
98. Other diseases of the Respiratory system	1				1		1	1	1				1		1
5 Diseases of the Digestive System															
100. Diseases of the Pharynx			1	1	1									1	1
102. Ulcer of the stomach			1	1	1	1	1								
103. Other diseases of the stomach	2	2		4	3	3			1	1	2		2		1
104. Diarrhoea and enteritis, under 2 years	6	6	2	5	2	4	4	1	15	36	19	7	65	38	4
105. Diarrhoea and enteritis		1		1	1				2	2	2				
107. Intestinal parasites											1				
108. Appendicitis and typhlitis	6	3	2	5	1	3	4	6	6	5	2				1
109. Hernia, intestinal obstruction	2		1	2				1	3	1		2		2	
Volvulus of the bowels				1				1	1						
110. Other diseases of the intestines					1			1						1	
111. Acute yellow atrophy of the liver		1								1					

1st., 1920 TO OCTOBER 31st., 1921

2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-90	90 up	Totals
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...	2	1	1	...	...	...	...	2	1	1	2	5	1	4	3	1	...	25
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1	...	1	1	1	...	2	1	...	3	5	4	5	8	8	9	9	1	59
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VITAL STATISTICS FROM NOVEMBER

Disease	1920		1921													
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Under 6 mos.	6 mos. to 1 yr.	1-2	
113. Cirrhosis of the liver	1		2	1	2		1	1	1				1			
114. Biliary calculi	1				1		1	1	1		1	1				
115. Other diseases of the liver	1		1				4									
117. Simple peritonitis, (nonpuerperal)	1	1	5	1	1		2	1			2					
118. Other diseases of the digestive system						1										
6. Diseases of the Genito-Urinary System																
119. Acute Nephritis	1	2	1	3	3	1	2		1	3	1	1	3		2	
120. Bright's Disease	4	5	7	3	8	3	5	1	5	6	5	6				
122. Other diseases of the kidneys and annexa			1	1							1	1				
123. Calculi of the urinary passage					1			1			1					
124. Diseases of the bladder		2			1			1	1	2	3					
125. Diseases of the urethra, urinary abscess, etc			1													
126. Diseases of the prostate	1	4	1		1	2	2	1	2	1		4				
128. Uterine Haemorrhage, (non-puerperal)			1													
129. Uterine tumor, (noncancerous)		2		1												
130. Other diseases of the uterus	1															
131. Cysts and other tumors of ovary								1								
132. Salpingitis and other diseases of ovary					1											
7. The Puerperal State																
134. Accidents of pregnancy		1				1										
135. Puerperal Haemorrhage		1					1		1		1					
137. Puerperal Septicaemia										1	1					
138. Puerperal Albuminuria and convulsions	1					1	1			1						
139. Puerperal phlegmasia, albadolens, embolus, sudden death										2						
8. Diseases of the Skin, etc.																
142. Gangrene						1										
144. Acute Abscess			1			1					1			2		
145. Other diseases of the skin and annexa							1				1		1			
9. Diseases of the Bones, etc.																
146. Diseases of the Bones																
Osteomyelitis						1				1						
Mastoiditis									1							
168. Amputations			1													
10. Malformations																
150. Congenital malformations	1	1	1	2	3	4	4	1	2			3	18		4	
Congenital hydrocephalus						1							1			
Congenital malformation of heart	1	1	1		1					1			5			

1st., 1920 to OCTOBER 31st., 1921

2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-90	90 up	Totals
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VITAL STATISTICS FROM NOVEMBER

Disease	1920		1921													
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Under 6mos.	6 mos. to 1 yr.	1-2
Spina Bifida	1			1		3							5		
11 Diseases of Early Infancy															
151. Congenital debility	8	3	4	9	2		4		3	4	7	2	42	4	
Premature Birth	8	3	8	6	9	5	4	4	9	6	6	3	70	1	
Marasmus	3		2			5			2	10	3	6	25	3	2
Inanition, etc						1	2	1	1	1	1		7		
152. Other diseases peculiar to early infancy	1	4	1	2	2	1		1	1	2		1	9	6	1
Haemorrhagica		1		1		1		2					5		
Difficult Delivery		2	1										3		
Atelectasis					1								1		
Injury by forceps at birth, etc					1							1	2		
12 Old Age															
154. Senility	2	8	4	4	7	4	3	2	1	3	2	1			
13 Affections Produced by External Causes															
155. Suicide by poison											1				
159. Suicide by firearms				1											
160. Suicide by cutting or piercing instruments		1													
165. Other acute poisonings						1									
167. Burns	2	2	1			1	3				3				1
168. Suffocation												1			1
169. Accidental drowning					1	1	2	3	4	1	1	2			1
170. Traumatism by firearms	1				1										
171. Traumatism by cutting or piercing instruments		1		1					1						
172. Traumatism by fall	1				1		2		2						
174. Traumatism by machine											1				
175. Traumatism by other crushings			1												
Railway crushings			2								1				
Struck by street car												1			
Automobile accident							2	2		1	1				1
179. Excessive heat, sunstroke									4				1	1	2
185. Fractures, cause not specified		1		1	1	1				1	4				
186. Other external causes		1								1					
14. Ill-Defined Diseases															
187. Ill-defined organic diseases							1								
188. Sudden death	1	1	1	1	1	2	1	2		3	2		1		
189. Cause not specified	2		1			2	1	3	1		1		1		1
Cause not known		1													
Totals	125	137	144	139	161	130	128	95	129	164	151	111	328	111	46
Stillbirths	16	7	12	16	13	17	18	15	10	10	15	12			
Totals	141	144	156	155	174	147	146	110	139	174	166	123			

1st., 1920 to OCTOBER 31st., 1921

2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-90	90 up	Totals
																		5
																		46
																		71
	1																	31
																		7
																		16
																		5
																		3
																		1
																		2
												1	1	4	6	23	6	41
											1							1
													1					1
											1							1
					1													1
3	1				1	1	2				1		1	1				12
																		1
1	3		3	1		1	1	1		3								15
			1						1									2
		1					1				1							3
							1				1			1	1	2		6
										1								1
							1											1
								1		1				1				3
						1												1
	2	1	1		1													6
																		4
	1		1					1		1		1		2			2	9
										2								2
								1										1
							2		1		4	2	4	1				15
				1	1	2	1			1	3							11
									1									1
42	68	28	39	49	39	52	54	52	69	69	88	97	88	107	72	92	24	1614
																		161
																		177

OWEN SOUND

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH, 1921.

Local Board of Health,
City.

Gentlemen:—

I beg to submit my annual report for the year 1921. Appended also are reports of Miss Kirkwood, Public Health Nurse,
Miss Stewart, School Nurse,
Dr. Norton, Veterinary Inspector.

The year just closed has been marked by the unusual number of cases of infectious disease. Diphtheria and small-pox have been prevalent, particularly during the latter part of the year. The cause of this prevalence is hard to ascertain, and has been general over nearly all the American continent. Locally, I am certain the cause is threefold.

Firstly:—The absence of Isolation Hospital facilities.

Secondly:—The extremely mild nature of the diseases, in many cases frequently overlooked, and I regret to say frequently hidden by the public.

Thirdly:—A weakening of the public conscience in the matter of obeying the restrictions imposed. This last is, I feel sure, the cause of many cases of disease and is due to a variety of causes, but is recognized by authorities all over Europe and America since the war. In the disease known as small-pox, the remedy lies in the hands of the citizens of the city. Vaccination will stamp out the disease entirely and nothing else will do so. Just so long as the public takes its advice in Public Health matters from charlatans and faddists, instead of from authorities on the matters involved, just so long will small-pox exist.

In reference to Diphtheria, the value of this advice is obvious. The same people who oppose vaccination oppose the anti-toxin treatment of Diphtheria, yet by the use of this remedy the death rate for all cases of diphtheria in the City was only about 2%. Those who have lived long enough to remember the 25 to 40% death rate of diphtheria in old days before anti-toxin was used won't need further argument.

Milk:—The quality of the milk supplied during the year has been excellent. Examination of samples taken regularly throughout the year has been continued and the improvement over previous years has been striking. Both as regards quality and cleanliness, the results are gratifying.

The report of the Veterinary Inspector, Dr. Norton, reflects this improvement, and the dairy farms from which the milk comes continue to advance along lines of cleanliness and sanitation.

Water:—The quality of the city's water supply is excellent. Samples are constantly being taken by Mr. Pratt, and recent reports are the best for years. A great deal of complaint was received, during the summer from residents on the West side about the water supplied; it was warm and discolored but not infected. The exact nature of this disturbance was not discovered although a variety of reasons were advanced. Water analysis was also continued where ice cutting was done; under no circumstances can ice be cut until permission is given by your officers.

In the matter of general Public Health improvement; the year will stand out as marking the greatest advance since I became Health Officer. This is due to, 1st, the establishment of a Laboratory here by the Provincial Board of Health.

2nd, the opening of a Baby Clinic, and 3rd, securing the services of a Public Health Nurse. I need not discuss the value of the Laboratory, the service it will gives is obvious, and the dividends it will pay are incalculable. Dr. Murry Fraser has been appointed Director, his salary paid by the Provincial Board, and under his direction the Laboratory will do, in fact is already doing excellent work.

The work of the *Baby Welfare Clinic* is proving a great success. Much credit is due Miss Kirkwood for her unwearying work, and the best thanks of the City is due Dr. Rutherford and Gaviller for their services in this connection. No salary is paid either of them, but it is hoped that the experience derived from the work done at the Clinic will be of value to them in their work, as its value will be proved in the improved general health of the children in the city. Owen Sound is fortunate in securing the services of a Public Health Nurse.

During the period covered by this report large numbers of complaints of various kinds were investigated by the Sanitary Inspector and remedied. In this connection I wish to express warm appreciation of the services of Mr. Brett, Sanitary Inspector.

The attention of the Board is called to the report of Miss Kirkwood in the Venereal Disease Clinic. Education of the Public in this matter is urgently needed if progress is to be made. The prevalence of these diseases, their serious nature. the variety of the methods of contagion; mark them as one of the most pressing problems of Public Health. All of which is respectfully submitted.

H. G. Murray

Dr. R. J. Norton's Report.

DR. H. G. MURRAY, M.O.H.

Owen Sound, Ont.

Dear Sir:—

Permit me to submit first report in 1922 re the Dairies.

I have visited forty-eight places, some of them the second time, and inspected three hundred and ninety-one cows. Out of this number I rejected only one, it having an actinomycotic lump in the throat. Most of the cows were in very good condition, and a good many of the premises are in excellent condition. Others are gradually improving, only a few I found unsatisfactory, which I have already reported to you.

Respectfully yours,

R. J. NORTON.

CHILD WELFARE CLINIC.

First Child Welfare Clinic was held under the capable supervision of Miss Castle, P.P.H.N. on April 14, 1921.

11 Clinics have been held including one in Alexandria School.

Children registered	307
Total attendance	628
Children examined	225
Referred to family physician	44
Advised as to proper feeding	92

The greatest part of Demonstration outfit including a splendid set of Clinical scales was donated by the Patriotic League. Other necessary supplies have been provided by the Red Cross Society.

The King's Daughters provided and made proper Layette for infants.

Miss Evelyn Smith Presented to the Clinic a Baby's toilet basket.

The ladies of the city have given of their time in assisting with the babies and providing and serving refreshments to the mothers. For this the McQuaker Co. have kindly provided cream each week.

To all of those mentioned and to numbers of others who helped I wish to express my warm appreciation and thanks.

PUBLIC HEALTH AND CHILD WELFARE VISITS.

Home visits in connection with Fresh Air Fund	59	
Diphtheria visits	77	
Home visits, Child Welfare	1010	
		1,146
Infant Welfare Visits	806	
Pre-school "	1131	
Total		1,937
Pre-natal visits	33	
Total number patients registered at Clinic 41 male & 12 female	53	
Number of Clinics held	122	
Total number of treatments given	651	
Average daily attendance for the period	6	
Completely cured and discharged or examined and found cured non-infectious	20	
Visited Venereal Disease cases	27	

During November and December and since the Clinic has been fully working, the average daily attendance was 11, the total number of treatments during December alone was nearly 200; and it is expected that this rate will be maintained or increased. The value of the work to the community can hardly be overestimated.

Organization visits	102	
Other visits (Business, etc.)	54	
Meetings attended	6	
		162

PEMBROKE.

To the Corporation of the Town of Pembroke.

I beg to submit the report of the Board of Health for the year 1921.

The following communicable diseases have been reported:—

Disease	No. of Cases	No. of Deaths
Smallpox	49	
Scarlet Fever	12	
Diphtheria	25	
Sleeping Sickness	1	
Mumps	3	
Chickenpox	32	
Mumps	3	
Typhoid	Town 17; Out-of-town 9	
Syphilis	6	
Gonorrhœa	6	

In connection with our small-pox epidemic, our Town is so situated that we are likely to have this disease appearing from time to time, and I trust the Isolation Hospital project will prove a reality in the incoming year.

Specimens of town water have been regularly supplied to the Department of Public Health throughout the year, and the chlorination of our water supply has been regulated according to these reports. In most cases of typhoid that I have personally investigated well water was the most likely source of infection.

The Town pump has been inspected at regular intervals by the Chief, and is reported to be well kept, and as free from objectionable odors as it is possible to keep it.

The public schools of the Town have employed a school nurse for the past year, and so satisfactory have been the services rendered in regard to the early detection of Communicable diseases among the pupils, sanitation, etc., that I would strongly recommend the Separate School Board to do likewise.

Under the auspices of the Local Council of Women the second week of November was set apart for Health instruction. The Provincial Board co-operated in sending Dr. Bell and Nurse Osborne, who contributed largely to the week's success. Dr. Bell, in addition to health clinics, gave a public address on health topics as well as a lecture to the nurses of both hospitals on Prenatal care. The clinics were well attended, and great interest was shown by the mothers. The importance of the early recognition of physical defects and the strong probability of their early correction was forcefully impressed by Dr. Bell. The Local Council of Women should be congratulated on the success of the undertaking. Our V. O. Nurse, Miss Shore, is, of course, continually working along the lines of Child Welfare besides her actual care of the sick, and this branch of her work is of great importance.

The Council is to be commended for providing a special sanitary inspector for a short term and from the satisfactory results obtained I would recommend that the same policy be adopted next year.

Several complaints have been received by the Board re condition of west end slaughter house, and on investigation were found to be justified. Two convictions were registered against the owner on two separate occasions.

Before closing I wish to thank the members of the Board for the interest they have taken in matters pertaining to health, and the assistance and co-operation of the citizens in making our Town a clean and desirable place in which to live.

All of which is respectfully submitted,

(Sgd.) A. J. SPARLING, M.D., *M.O.H.*

PETERBOROUGH BOARD OF HEALTH.

PETERBOROUGH, ONT., Nov. 30, 1921.

To the Chairman and Members of the Board of Health of the City of Peterborough.

Gentlemen:—

I herewith submit my report ending November 20th, 1921:—

One Scarlet Fever with infection of Streptococci, one Scarlet Fever, one Diphtheria unconscious when admitted, one Diphtheria died in 5 days, one Diphtheria with Brights Disease, one Diphtheria with Edema of Lungs, one Diphtheria with chronic diabetes 5 hours after admission, and one Diptheria died 16 hours after admission.

There has been established in connection with this Hospital a training school for nurses who under certain conditions can graduate from same. There are four now in training.

We have not been able to carry out the painting, etc. which your Board recommended on account of the number of patients this Fall.

I would strongly advise sewer connection for this Hospital. Am sorry to report that two nurses contracted contagious diseases, one diphtheria and one Scarlet Fever.

The City Filtration Plant is rapidly nearing completion. Pending this the water has received Chlorination all Summer.

The milk supply of the City is good, and monthly tests show it to be up to Government standard re fats.

The City is now starting the construction of a Sewage Plant of large dimensions which will be of untold advantage.

The Provincial Board of Health this month just completed the establishment of a Branch Laboratory at a very considerable cost. This is a most valuable asset to not only the City but the District. It is in charge of an experienced Director. All kinds of tests can be made with the least possible delay, which is extremely valuable to the public from Health and Diagnostic standpoint.

Many houses have been this year connected with sewers but there are many more yet to be done.

I have the Honour to be Gentlemen

Your Obedient Servant,

(Sgd) T. W. H. YOUNG, *M.O.H.*

The following infectious cases were reported:—

Scarlet Fever	123
Diphtheria	141
Chickenpox	1
Smallpox	8
Measles	3
Typhoid Fever	2
Mumps	1

Number of cases treated in Queen Mary Hospital 209, as follows:—

Diphtheria	83
Scarlet Fever	183
Measles	1
Sleeping Sickness	1
Mumps	1
Deaths in Hospital	7

PORT ARTHUR.

PORT ARTHUR, ONT.
October 31st, 1921.

S. A. COULTER,
Chairman, Board of Health.

Dear Sir:

I beg to submit my Annual Report for the year ending October 31st, 1921.

I am pleased to be able to state that we have had a very successful year. Our Isolation Hospital has been without patients several times during the year, which is gratifying. We made extensive improvements to the Hospital, painting it inside and out at a cost of four hundred and sixty dollars and fifty cents. We also built the veranda, so long promised by different Boards, at a cost of One thousand and fifty-five dollars and fifty cents. These improvements were very badly needed and have made a very decided change on the building. We also purchased a new pump which was necessary as the old one had outlasted its usefulness and had cost a large sum each year in repairs, as well as being very noisy. The new pump has been installed and seems to give entire satisfaction. The supply of water is not what we should like to have, however it supplies the needs of the Hospital for general use. We have to haul water from the city mains for drinking purposes and hope the mains may yet be extended to the Hospital as the present water supply will never give satisfaction. During the year I examined six insane persons in the gaol, for the Police Magistrate. I have been called to the Police Station several times to attend prisoners who were ill or hurt. I have also attended a number of men employed in the Firehalls. I have attended the children in the Shelter, several of whom I had to remove to the general hospitals for treatment. I had a number of patients sent me by the Salvation Army, nine of whom I had removed to the Hospitals. With Dr. Sparks, the District Officer of Health, and Mr. Hayes I visited the dairies last Winter. We found two in a very poor condition, Laurin & Son's and Paquette's, Paquette has good stables and equipment but it was very dirty, Laurin had poor equipment and stable accommodation for the number of cattle he had. Since that time they have made improvements. With Dr. Sparks and an Official from the Provincial Board I paid a visit to the Pumping Station to inspect the chlorination plant. Dr. Sparks and I had made an inspection there before. We found the quantity of chlorine being used was not sufficient to make the water safe for use and had to increase the amount. Sewage sometimes gets into the water, especially when there is a strong south wind to drive the water from the harbour in the direction of the intake. However, since regulating the amount of chlorine we have had no bad reports from the Laboratory in Fort William where we have the water tested regularly.

We have only had one case of typhoid fever reported which is a decided change from our reports of a few years ago.

You will note we had seven cases of tuberculosis reported with thirteen deaths. This is partly accounted for by some of these deaths being reported from outside townships. Also some of the cases may have been reported last year although the patient died this year. I am satisfied though that there is a laxity on the part of the public in reporting these cases, partly accounted for by the fact that the Regulations do not call for quarantine. Our school nurses have done good work and have been kept busy visiting the schools. Every school is visited each

week, the name of absent pupils obtained, and the nurse visits the homes to find the cause of the child being absent. By this means we are able to find and check contagious cases which would not otherwise be known. The nurses also make an examination of every child in the schools twice a year for eye, throat and teeth trouble, and they also examine the heads for vermin.

In conjunction with Fort William we established a venereal clinic, which is now doing a most important work. I understand there are at present over sixty patients under treatment. What this means to future generations it is impossible to estimate.

VITAL STATISTICS.

The estimated population of Port Arthur is ..... 15.629.
Births. (Males 258. Females 256) ..... 514.
Total deaths registered in the city ..... 255.
(Deaths in city 228, from outside places 27.)

Of the deaths reported twenty-four were accidental or violent.

Deaths from drowning ..... 8.
" " fracture of the skull ..... 1.
" " injury to the chest ..... 1.
" " railway accidents ..... 4.
" " shooting ..... 4.
" " lightning ..... 1.
" " killed by an axe ..... 1.
" " " by a tree ..... 1.
" " " by a horse ..... 1.
" " " by an auto ..... 1.
" " " by attempted abortion ..... 1.

Eighty of the deaths were children under one year of age, and of these eighty, forty-six are given as stillborn or premature. This is a large number of children to die at time of birth and we trust the day may soon come when this great loss may be overcome.

STILLBORN.

1916 ..... 39.
1917 ..... 53.
1918 ..... 39.
1919 ..... 47.
1920 ..... 62.
1921 ..... 46.

CONTAGIOUS CASES REPORTED

	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.
Scarlet Fever	3	4	4	6	4	4	3	1	3	0	2	2
Measles	0	4	5	3	0	0	1	1	1	1	1	0
Chickenpox	2	14	26	3	7	11	4	7	2	0	1	0
Smallpox	0	0	0	0	0	0	1	0	0	0	0	0
Whooping Cough	0	0	2	0	0	0	0	1	1	4	2	6
Typhoid Fever	1	0	0	0	0	0	0	0	0	0	0	0
Diphtheria	0	1	0	2	0	0	1	1	1	0	4	10
Tuberculosis	2	0	0	2	0	0	2	0	0	0	1	0
Mumps	1	1	11	21	15	7	3	3	0	0	0	2
Polio-Myelitis	0	1	0	0	0	0	0	0	3	4	0	0

Total Number of Cases for Year.

	Cases	Deaths
Scarlet Fever	36	0
Measles	17	0
Chickenpox	77	0
Smallpox	1	0
Whooping Cough	16	1
Typhoid Fever	1	1
Diphtheria	20	1
Tuberculosis	7	13
Mumps	64	0
Polio-Myelitis	8	0

Scarlet Fever

Year.	Cases	Deaths
1918	66	3
1919	115	3
1920	101	7
1921	36	0

Diphtheria

1918	16	1
1919	4	1
1920	14	2
1921	20	1

CONTAGIOUS CASES.

MEASLES.

Year	Cases	Deaths
1918	6.	0.
1919	12.	0.
1920	334.	0.
1921	17.	0.

WHOOPING COUGH.

1918	58.	3.
1919	1.	0.
1920	5.	0.
1921	16.	1.

TYPHOID.

1918	5.	1.
1919	4.	0.
1920	3.	1.
1921	1.	1.

POLIO-MYELITIS.

1918	0.	0.
1919	0.	0.
1920	1.	0.
1921	8.	0.

ISOLATION HOSPITAL.

In 1919 we treated 123 Patients in the Hospital.
In 1920 we treated 71
In 1921 we treated 33

Scarlet Fever	13.	Cases
Diphtheria	14.	"
Measles	4.	"
Mumps	1.	"
Chickenpox	1.	"
	33.	

FINANCIAL STATEMENT.

Salaries	$10.295.00
Meal Account at Hospital	666.85
Fuel	426.90
Public Utilities. (Phone, Light, Tickets, Gas, Team)	664.63
Relief	216.50
Wells & Emmerson. (Pump)	203.10
Mahon Electric	56.86
Dominion Plumbing	9,79
Marks Clevet & Dobie Co	191.29
I. L. Matthews Co.	76.14
Drugs and Surgical Supplies	90.94
Special Nurse	132.00
Sundries	192.30
Dr. Coldwell, Vaccinating in 1920	30.00
Dr. Smith, Vaccinating in 1920	30.00
Martin. Painting inside walls at Hospital	200.00
Virge. Painting Hospital & Veranda	260.50
Dunbar. Building Veranda	1,055.50
Total	$14,819.32

CREDITS.

City of Fort William toward Nurse's salary	$350.00	
Collections	392.50	
Sale of stove	20.00	
From Public School Board	350.00	
From Separate School Board	57.50	
	$1,200.00	
Net Total		$13,619.32

I have the honor to be
Sir,
Your obedient Servant,

C. H. Laurie,
Medical Officer of Health.

PORT HOPE

Inspection of Schools.

The reports upon the inspection of the High and Public schools of the town of Port Hope for the year 1921 have been forwarded to the trustee boards and to the Provincial Board of Health.

The sanitary condition of these schools was found to be quite the same as reported in the year 1920. The most urgent need at the East and West Primary Schools is the installation of proper sanitary closets. It would not be a difficult matter to have this done if sewer accomodation were available. When the Municipal Council decides to extend the sewage system of the town they should keep in mind the condition and need of these schools and endeavor to build sewers that may be made available for the use of the schools.

Slaughter Houses.

There are two butchers who make a business of slaughtering animals and selling meat on the market and neither of them have a proper slaughter house. They have been supplied with a copy of the regulations and have promised to construct buildings in accordance with these regulations.

There is still need for improvement in some of the slaughter houses inspected but on the whole there has been a marked and gratifying change for the better. Much credit is due to Mr. George Perrin who has constructed an entirely new building for the slaughtering of animals at Dale. Any one who buys meat from Mr. Perrin can be quite sure of getting meat that is clean and wholesome and that has been produced under the most satisfactory conditions.

Infectious Disease.

For the year ending November 30, 1921, we have been very free of infectious diseases, there being only twenty-one cases notified, viz:—eight of diphtheria, six of typhoid fever, one of tuberculosis, two of scarlet fever and four of chicken-pox. Three of the typhoid cases were from outside municipalities and did not contract the disease in Port Hope. But it is evident the three remaining cases did contract the disease in Port Hope as none of the parties had been out of town for some time previous to falling ill. Most probably all became infected some time between the twentieth and the thirtieth day of September.

It is not possible to point out the source of infection with absolute certainty but from the evidence gathered it is most likely that all the parties became infected from the same source.

Milk.

Samples of milk have been taken regularly each month for examination. The average for the year was 3.22 of butter fat.

The premises of all the vendors and also of the dairymen supplying them have been inspected, and in the majority of cases were found quite satisfactory.

During the year one large dairy had trouble with roapy milk. This condition is usually caused by different kinds of bacteria which get into the milk after or at the time of milking. Cows that pasture in swampy places are very apt to get the udders and flanks covered with mud. This mud dries on the cow

and if the udders are not carefully cleansed the dust is apt to fall into the pails during milking. Or the water used for washing pails and dairy utensils may contain the harmful bacteria and thus infect the milk. The milk assumes a stringy, roapy, slimy or mucilaginous condition a few hours after milking. Roapy milk is, as a rule not injurious to health. The remedy is thorough cleanliness of udder and very careful scalding and cleansing of all dairy utensils. Milk containers should be washed with one pound of chloride of lime in ten gallons of water. Soap, washing soda, scalding water, strong solution of freshly slaked lime are all useful as cleansing and disinfecting agents.

Port Hope Water Supply.

Following is the report of water analysis for each month of the year ending November 30, 1921, viz:—

1920.						
Dec.	Samples taken	5,	number of samples contaminated			2
1921.						
Jan.	"	"	6,	"	"	" 3
Feb.	"	"	6,	"	"	" 2
Mar.	"	"	10,	"	"	" 8
Apl.	"	"	8,	"	"	" 0
May	"	"	8,	"	"	" 0
June	"	"	4,	"	"	" 4
July	"	"	8,	"	"	" 8
Aug.	"	"	8,	"	"	" 4
Sep.	"	"	7,	"	"	" 4
Oct.	"	"	7,	"	"	" 2
Nov.	"	"	7.	"	"	" 0
			84			37

Of the thirty-seven samples contaminated,

4	showed	colon	bacilli	in	1	cubic	centimetre	of	water,
2	"	"	"	"	5	"	"	"	"
23	"	"	"	"	25	"	"	"	"
8	"	"	"	"	50	"	"	"	"

The total number of samples taken was eighty-four, and thirty-seven of these showed contamination with bacteria of intestinal origin, while forty-seven were pure. Some of the samples showed an amount of pollution that is considered dangerous. The pollution is intermittent and one cannot say when it is going to take place or how long the water may be contaminated. Therefore the only safeguard under these circumstances is to see that the filters are working efficiently and to have the water chlorinated continuously.

Chlorination of Water.

When the new filtration system was being considered by the town, Dr. Amyot very strongly emphasized the fact that water taken from the lake should be both filtered and chlorinated. In 1915 when the filtration plant was first put into operation, instructions were given to chlorinate the town water continuously, and since 1915 no change has been made in this order. No instructions have been given that chlorination be discontinued. If one were sure that the filtration plant were doing efficient work it is possible that a time might come when it might be safe to discontinue the chlorination, or when it might be considered sufficient to use only a small percentage of chlorine. Such a time has not arrived. On

the other hand, in 1919 something happened to the intake pipe which runs out into the lake about one thousand feet, and which supplies water for the filtration plant. This pipe became blocked with sand for a time, and shut off the supply of the filters. Since this happened, the water has at times been badly polluted, thus showing the great need of continuous chlorination. During the past year it happened that for three months all the samples taken for examination were pure. This was in the months of April, May and November. But the fact that we occasionally find that all the samples examined are free from pollution does not mean that there should be a decrease in the amount of chlorine used. The condition of the water varies from day to day and from hour to hour, and a favorable report from the samples of any single month, considered by themselves, should not be interpreted as indicating that the water is of a uniformly good quality. Hence it might be very misleading to announce to the public that the water samples of any one month had been found of good quality. The quality of the water can only be judged from the examination of quite a number of samples taken over a considerable period of time. And in every case the analysis as found by the examinations made in the laboratory must be considered in connection with the sanitary survey of the water-gatherng area and the epidemiological evidence for the few months past.

Supplies.

The following supplies were obtained for the use of the board and for physicians during the year 1921, viz:—

Eleven dozen nitrate of silver ampules, used for the prevention of baby's sore eyes.

Ten dozen sterilized bottles for forwarding samples of water to the laboratory for analysis.

Enough typhoid and paratyphoid vaccine to immunize ten persons. This vaccine is used as a prophylactic against typhoid fever.

Six smallpox vaccine points.

Two dozen diphtheria swabs used for sending specimens to the laboratory for examination and diagnosis of diphtheria.

Four dozen slides for sending specimens of blood in suspected cases of typhoid fever.

Two dozen slides for sending smears for examination in suspected cases of gonorrhoea.

Two dozen sterilized bottles for forwarding specimens of sputum for examination in suspected cases of tubercuosis.

Nine dozen and a half vials of diphtheria antitoxin used in the treatment of diphtheria and as a prophylactic against the disease.

A sufficient number of ampules of phenarsenamine for the treatment of two persons with syphilis, and also the apparatus used for administering the phenarsenamine.

A number of packages of pertussis vaccine used for the prevention and cure of whooping cough.

Slaughter house regulations for butchers and report cards for making weekly reports of venereal diseases.

Port Hope, Dec. 1st, 1921.

Geo. A. Dickinson, *M.O.H.*

RENFREW.

To the Chairman and Members of Board of Health.

GENTLEMEN:—

I have the honour to submit to you the report on the sanitary conditions of the town, and the Health Department for the year December 1st, 1920—November 30th, 1921. There has been reported during the year the following contagious and infectious diseases.

Diphtheria	33	cases
Smallpox	13	"
Scarlet Fever	4	"
Chicken Pox	7	"
Typhoid	6	"

Numerous cases of mumps and whooping cough. There were two deaths from Diphtheria or its after effects and one from Typhoid Fever: The number of Diphtheria cases was unusually high this year, due no doubt to the fact that the disease was epidemic in the Province: and occurring at the time of the year when it usually reaches its peak, namely November. There were more cases of Diphtheria in Ontario in November and a greater mortality therefrom, than in any year for the past number of years. In this connection I would repeat this word of warning; "The most important single factor responsible for the continuance of Diphtheria deaths is neglect of early treatment: failure in this respect is usually due to delay in calling a physician in cases of sore throat in little children: every sore throat is potentially dangerous: only the physician can decide which cases are serious and which unimportant."

Antitoxin is always on hand and supplied free of charge. The number of smallpox cases was no doubt due to neglect in early reporting of the cases. The order of the Board, re innoculation of pupils attending school was carried out—about 400 being vaccinated, who had never been previously vaccinated, 18 cases in all were treated in the Isolation Hospital Pest House, the total days stay in the Isolation Hospital being 428 days. Frequent water analysis shows the town water bacteriologically pure after chlorine treatment, which is being continued with satisfactory results. Diagnostic outfits as supplied by the Provincial Board of Health have been supplied to the local physicians, and sera antitoxins, vaccines etc., are always kept on hand and supplied free of charge. The Isolation Hospital and equipment are in good condition, and the same arrangement as in former years with Victoria Hospital having been made, I would recommend its continuance.

A few complaints re nuisances have been investigated and remedied, and the Town dumps have been put under the supervision of an attendant.

Garbage collection and collection and disposal of night soil are still carried on with only fair results. Frequent recommendations re night soil disposal, and establishing of sewer connections, in order to do away with out door closets have been made to Council and it is to be regretted no positive action has been taken.

During the year there have been reported, 189 births, 80 deaths, and 63 marriages, compared with 185 births, 111 deaths, and 60 marriages, last year.

Numerous complaints re supply and distribution of milk made to the Board have been handed over to the Milk Inspector and no doubt have been disposed of. Although the expense of this official is charged up to the Board of Health, he apparently is not responsible to the Board. We are of the opinion that this work

could be done at much less expense, and more efficiently and with better results by an inspector under the direct control of the Board of Health.

The sanitary conditions of the Town, and the Health of the Community are both satisfactory.

I wish to thank the Board, the Secretary and the Sanitary Inspector for valuable assistance and co-operation during the year.

JAS. J. MCCANN, M.D.
M.O.H.

SARNIA.

Jan. 24, 1922.

Mr. Chairman & Members,
Of the Board of Health,
Sarnia, Ontario.

Gentlemen:

I beg to submit my 4th Annual Report of the Health Department of the *City of Sarnia* for the year ending Dec. 31st, 1921. The census taken by the City Assessor last year showed the City of Sarnia to have a population of 14,905. The City Clerk's Register shows that we had 395 Births, 203 Deaths, and 182 Marriages. The percentage of deaths was 13.62 per thousand which was nearly 5 per thousand less than the previous year. We are pleased to report that we have had no epidemic such as we had two previous years of any importance outside of the usual cases of infectious and contagious diseases that any city is bound to have. The number of communicable diseases all told was 404 reported, consisting of venereal 75, diphtheria 53, scarlet fever 49, measles 186, typhoid fever 4, small-pox 4, tubercular 4, chicken-pox 16, itch 9, and Spanish influenza 4. These cases have been pretty well scattered throughout the City and we have not been able to trace the origin to any one particular source, and consequently are due to citizens not reporting mild cases and those having a tendency to infect children by carelessness from exposure.

Venereal Diseases

We beg to report that during the year more attention has been paid to the conduct of persons so infected with venereal disease. A number of such cases have been reported and they have been notified to place themselves under the care and treatment of a legally qualified medical practitioner and if unable to secure medical treatment they must apply to the Medical Officer of Health of their Municipality whose Medical Officer of Health will direct him or her as to how to obtain treatment, and that during this treatment they must attend and get such treatments until the Medical Practitioner certifies to their complete cure under a penalty of fine. During the year we had a visit from Dr. McClenahan, Director of Venereal Disease Division, Provincial Board of Health, who met a number of the Medical men of Sarnia in June last as to the advistbility of starting a Venereal Clinic here. Money was appropriated by the Federal Government for 3 years to be supplemented by the Provincial Government with an equal amount and distributed to each Province according to population. The Provincial Board of Health has taken advantage of this offer and have established a large number of Venereal Clinics in most of the Cities of Ontario and we thought it would be wise to discuss with the Director of Venereal Diseases. After some discussion we decided to have the City Physicians report all these cases in order to see if the number requiring treatment would indicate that such a clinic should be formed. This clinic was merely for those unable to pay for their treatments. Some 50 cases have been reported by a few physicians of which about one dozen were unable to pay as the cost was too expensive, and I feel satisfied that only a small percentage have been reported. The law provides that in such cases the Municipality must pay a reasonable charge for such cases and it might cost the Municipality several hundred dollars were we to strictly observe these cases and in order to prevent such I am of the opinion it would be more economical to have a clinic started

here where those so infected and not able to pay could be given free treatments and make them healthy citizens and lessen the burden on the Municipality in later years.

Public School Nurse

The School Board still employs a school nurse whose duties are to visit the various schools and give her special attention to the health of the children attending schools and when any defects are found they are advised by a notice to their parents of such defects and we have found that her services are fully appreciated and many children when properly treated by their physician are made well and better results are shown by their advancement in school work. No epidemic of any importance has been shown during the year which I think is largely due to timely observance of a sick child in the school room. We have had no occasion to close any of the school rooms except for fumigation purposes.

Baby Welfare Clinic

Miss Menzies who was appointed by the Red Cross Society to supervise the clinic has devoted much time to this clinic which is held in the Public Library every Thursday afternoon from two to five o'clock where the mothers bring their babies under two years of age to be weighed and given such advice as the Medical man in attendance may think fit. I must again report that the clinic has been a success from the time it opened. The first year of its organization shows that 150 babies were enrolled, and according to statistics only one death occurred among the babies so attending. The physicians have co-operated with me in taking this clinic when so called upon. The second year has shown an increased attendance and the mothers of the babies delight in the opportunity of bringing the babies to the clinic. The work has so increased that it is necessary to have additional help, so the Red Cross Society has appointed an assistant to Miss Menzies for the next three months and it may be necessary to have three physicians instead of two to assist at each clinic. We desire to thank the Public Library Trustees for the free use of the Library Auditorium for this clinic. The District Medical Officer has advised that co-operation of the work of the School Nurse and the Social District Nurse might be worked to better advantage by giving each nurse one half of the City so that their work could be more effectively performed. The Red Cross Society have paid all expenses in connection with the clinic up to the present time.

Sewerage

The City has now more than thirty-one miles of sewers which have connection with nearly every home in the City so that very few homes are unconnected with our sewerage system, such homes unconnected have their outside closets cleaned annually under the supervision of the Sanitary Inspector.

Water Supply

Our new water works at Point Edward is now giving us a supply of water equal to any water supply in Canada, and we have a plant able to supply us with all the water that is required. Samples of water are sent by the Sanitary Inspector regularly to the Institute of Public Health for analysis and their reports have been very satisfactory. The ice supply is obtained from two sources,

Viz; (1) Artificial, (2) Obtained largely from the Bay, and very few complaints have been registered by customers from either source of supplly.

Garbage

The disposal of the garbage throughout the City has been taken care of by the City Council. All garbage that is capable of being burned is taken to the Incinerator and that which consists of ashes, bricks, cans, etc. is now being used to fill a hollow on the Athletic Field, and the old hollow on South Mitton Street has been filled and covered with suitable earth which removes the unsightly appearance of that part of the City.

Milk Supply

The milk supply to our citizens comes from two sources, viz; (1) Creamery (2) Dairymen. As in the past, careful attention has been given to the source of supply, viz; the producers. Every winter or early spring we have our Veterinary Surgeon visit these producers and inspect the cows, barns, yards, milking utensils, health of farm hands and methods of cooling the said milk and we find since the introduction of the questionnaire which I had made out three years ago a decided improvement in the quality of the milk. Several times a year our Sanitary Inspector obtains samples of milk from the dairymen and creamery. By testing for dirt, etc. and the bacteriological test for the Institute of Public Health, a very decided improvement has resulted. Nothing has yet been done towards a medical examination of all those who are handling the milk, viz., the dairymen and the drivers of the producing farm or at the Creamery. I hope to have introduced to our City Council an up to date milk by-law as the one now in force is obsolete.

Isolation Hospital

An Isolation Hospital is of urgent need as we have no place to take patients infected with communicable diseases and a City of this size should have even a small place for such cases. Last year at a meeting of the Trustee Board of the Hospital the chairman informed me that we could have either of the buildings in their possession for such purposes and this request has already been placed before the Board. As the Hospital is now City property it was necessary to get the present City Commission of the Hospital to grant this request. The communication was sent to the commission but was turned down for the present. The law provides that it is not necessary to submit a by-law for money to build an Isolation Hospital and that the City Counicl can make the grants. I think the Board of Health ought to make a requisition to the City Council to grant us one of the houses spoken of or give us the funds to build a small hospital for the present.

Recommendations

1. That immediate steps be taken by the City Council to provide a suitable building or erect a small Isolation Hospital which could be added to as the City requires increased accommodation for the care of infectious and contagious diseases.
2. That we request the City Council to co-operate with the Provincial Board of Health and establish a Venereal Clinic at the Sarnia General Hospital for the treatment of those citizens who are unable to pay for their treatments.

3. That a Veterinary Surgeon again be appointed to inspect all places where milk is procured and sold to dairymen and creameries, and that permits be granted to those who comply with approval of Veterinary's inspection.
4. That the Public School Nurse be placed more under the supervision of the Board of Health so that better co-operation and better results may be obtained than under the present system.

(Sgd.) WM. LOGIE, M.D., *M.O.H.*

DISBURSEMENTS

BOARD OF HEALTH, 1921.

1.	*Medical Supplies.*—		
	Provincial Board of Health	61.69	
	Medical Supplies necessary for use with Fumigator	98.55	160.24
2.	*Express, Telephone and Telegraph.*—		
	Charges re Samples of Water sent for analysis	14.25	
	Telephone for Inspector	28.75	43.00
3.	*Repairs and Appliances.*—		
	Generator	46.00	
	Water Boxes	15.00	
	Repairs to Fumigator	4.75	
	Repairs to Bicycle	6.25	72.00
4.	*Salaries and Pay Lists.*—		
	Wm. Logie, M.D., M.O.H.	600.00	
	W. H. Haney,	250.00	
	A. Crosbie	1,500.00	2,350.00
	For Inspector Crosbie—Suit	65.00	
5.	*Uniforms.*—		
	For Inspector Crosbie—Suit	65.00	
	—Cap	3.50	
	—Shortening Overcoat	1.00	69.50
6.	*Smallpox Epidemic.*—		
	Rent and Supplies, etc.	81.38	
	Dr. Logie—Services.	97.05	178.43
7.	*Stationery and Printing.*—		
	Stationery	30.19	
	Printing	11.75	
	Distributing Bills	10.75	
	City Directory	4.00	
	Lettering Office	1.50	
	Tacks	.70	58.89
			$2,932.06

M. D. STEWART,
Secy. L. B. of H.
SARNIA, ONTARIO, MARCH 16, 1922.

REPORT OF PUBLIC HEALTH NURSE FOR YEAR ENDING NOVEMBER 15th, 1921

Date	Miscellaneous	Infant Welfare	Tubercular	Child Welfare	Mother's meetings	Sickness	Prenatal	Inspections	Operatons	Relief	Well Baby Clinic	Total
1920												
November 16th-30th	12	38	2	2	2	4	3	....	....	....	....	63
December	45	71	4	5	5	10	2	13	....	....	....	155
1921												
January	16	65	2	....	2	16	....	....	3	82	....	186
February	16	52	10	9	1	32	....	7	....	48	....	175
March	24	77	2	9	1	19	13	....	....	30	1	176
April	28	87	7	14	4	7	8	....	....	13	5	173
May	32	122	6	7	2	5	5	....	....	13	5	197
June	24	122	4	12	3	2	....	....	....	22	4	193
July	25	118	2	9	....	13	3	....	....	12	4	186
August	29	108	5	14	3	20	5	....	....	12	5	201
September	14	42	3	4	1	4	2	....	....	8	3	81
October	18	110	3	9	2	2	2	....	....	13	4	163
November, 1st-15th	11	34	....	....	....	4	1	....	....	9	2	61
Totals	294	1,046	50	94	26	138	44	20	3	262	33	2,010

SAULT STE. MARIE.

To the Mayor and Alderman, of the City of Sault Ste. Marie, Ontario.

GENTLEMEN:—

I have the honour to submit for your consideration my report of the sanitary condition of the City of Sault Ste. Marie for the year 1921.

VITAL STATISTICS.

Estimated population	22,039
Births to date	717
Deaths to date	296
Marriages	236

Infectious Diseases.

Smallpox.—We had an epidemic of this disease during the early months of the year. We had 174 cases of the disease. There were no deaths. Thirty-four cases were taken care of in the Isolation Hospital. During the year I did almost eleven hundred free vaccinations.

Scarlet fever.—This disease has been epidemic during the past two months. One hundred and twenty six cases have been reported and there have been three deaths. The epidemic is now almost over.

Diphtheria.—This disease has also been epidemic during the past two months. One hundred and twenty three cases have been reported. There were five deaths.

Measles.—Sixty seven cases. One death.

Typhoid fever.—Three cases. No deaths.

Venereal diseases.—Syphilis, four cases; Gonorrhoea, ten cases.

Tuberculosis.—This is still the most fatal of the communicable diseases. There were fourteen deaths from all forms of this disease.

Chicken pox.—Three cases. No deaths

Dairies and Milk Supply.

The dairies supplying milk to the city were inspected by the members of the Board of Health. Two vendors were shut off on account of unsanitary premises. In other cases changes in stabling arrangement were asked for in order to insure more cleanly handling of the milk.

Boarding Houses, Hotels and Restaurants.

These places have been regularly inspected and all have been kept in good condition during the year.

Butcher shops and Meat supply.

The butcher shops were inspected regularly by the sanitary inspector. The meat supplied to the public has been of a good and wholesome quality.

Nuisances.

These were always immediately abated. The efficient manner in which the garbage collection was carried on by the City Engineer's Department kept the city cleaner this year than it has been for a good many years.

The Market.

The market has been freely used by the farmers and other and has been well patronized by the public. The food and produce offered for sale has been of good quality and carefully handled.

The Public Health Laboratory.

By the courtesy of Dr. N. F. W. Graham, Director of the Public Health laboratory, I attach as part of my report a summary of the work done at the Laboratory during the past twelve months.

DIPHTHERIA	Swabs for diagnosis.	
	Positive	275
	Negative	986
		1261
	Swabs for release.	
	Positive	190
	Negative	250
		440
TUBERCULOSIS	Sputum for examination	
	Positive	28
	Negative	100
		128
TYPHOID FEVER	Widal Test.	
	Positive	3
	Negative	7
		10
CEREBRO-SPINAL FLUID	Cerebro-spinal	
	Meningitis	2
	Tuberculous	
	Meningitis	4
		6
SYPHILIS	Colloidal gold test	2
	Wasserman	
	Positive	132
	Negative	188
		322
GONORRHOEA	Smear examinations.	
	Positive	61
	Negative	66
		127
MILK EXAMINATION	Fat content	207
	Bacteriological	458
	Adulterants	25
	Tuberculosis	50
WATER EXAMINATION	Bacteriological.	
	Plates cultured and counted	9500
	Chemical	250
MISCELLANEOUS ANALYSES	Blood.	
	Typing for transfusion	50
	Anaemia, etc.	20
	Urine	500
	Oil	25
	Beer	33
	Moonshine	25

During the past week the Laboratory has been able to discover for the Fish Hatchery that the cause of death of innumerable fish spawn is due to Hydra Fusca and this discovery may save millions of trout and white fish.

The Isolation Hospital.

Patients admitted—Smallpox	34	cases.
Diphtheria	10	"
Scarlet Fever	2	"

Public Health Nurse.

Miss Miller made 2218 calls during the year and attended seventy-five baby clinics. She visits every home where a new baby arrives and assists and advises the mother in the care of the infant. She visits home where sickness exists and co-operates with the attending physician in the care of the sick. She is on the look out for defects in children of pre-school age. She attends the baby clinics twice a week. The infant mortality rate in the city is beginning to fall. An alarming loss of life in this city is the still born infant. Almost one third of the deaths in the city are infants one to two years of age and of those almost one quarter are still born infants. The causes of this mortality are ignorance of the young expectant mother, no prenatal care or advice and the absence of proper medical and nursing care at the time the child is born. During the coming year we will have one afternoon a month when expectant mothers may attend the baby clinic for advice. During the year at the baby clinics there was an enrollment of 430 babies with an attendance of over 1000 for all babies.

The duties of the Sanitary Inspector were faithfully performed.

The Board of Health was an active organization during the year. Mr. G. J. Saunders was Chairman of the Board and Mrs. Morgan and Mr. Drew were valuable members.

All of which is respectfully submitted.

A. S. McCaig.
Medical Officer of Health.

SIMCOE.

To the Chairman and Members of the Board of Health for the town of Simcoe.

Gentlemen:

I beg to present the following report as Medical Officer of Health for the year 1921.

Communicable Diseases: We had reported during the year—

Small-pox	23	cases	0	deaths
Measles	23	"	0	"
Scarlet fever	5	"	0	"
Typhoid fever	2	"	0	"
Chicken pox	3	"	0	"
Diphtheria	2	"	0	"

Small-pox raged as a mild epidemic during the winter months. The Board found it necessary to order a general vaccination of all school children early in January, as vaccination had been somewhat neglected for some years, and all pupils attending schools were required to present a vaccination certificate within a prescribed time, as one measure towards checking the present as well as future epidemics. This requirement was generally complied with and all school pupils presented themselves to the various physicians of the town, with but very few making any objection.

As the small-pox subsided in the late spring months, measles also prevailed in a mild epidemic form, and continued towards mid-summer. The Board adopted the placarding provision, a measure that in former years had not been rigidly adhered to. Considerable friction resulted, but not without good effect, as it proved that a few cases were not being reported which had a tendency to place the physicians that were performing this duty conscientiously, at a disadvantage as anyone could readily see. After the importance of prompt reporting of such cases was called to the attention of those responsible, no difficulty was experienced and all cases were regularly reported thereafter. With this possible exception it appears that all cases coming to the notice of our local physicians of this and all other contagious diseases have been promptly and regularly reported and much credit is due to the local physicians for this important duty performed. For this service there is no other "honorarium" than an all abiding faith of an intelligent populace in the honor of the medical profession to protect them in so far as this public duty can do so. It might be said too, that some families were shielding cases of measles in order to escape the quarantine regulations, but no cases were discovered in time to prove the disease positively.

Typhoid fever was again conspicuous by its absence, only two cases being reported, which is gratifying in view of this disease in former years being so prevalent. The continued use of a good water supply, the extension of sanitary sewers, and perhaps the most important, the fact that people generally are better informed as to the importance and necessity of observing the more essential points of sanitation.

We were fortunate in not having many cases, proportionately, of scarlet fever as the quarantine period of six weeks at least, is so long, tiresome, and in all cases expensive. It was necessary to supply some of these families with assistance in the way of food, as breadwinners were not able to continue their usual employment. There were eleven cases of venereal disease reported, which is undoubtedly a very low estimate of the actual number of cases that occurred.

It was necessary to disinfect those class-rooms in each of the three schools and the business college, where pupils had contracted, or been exposed to contagious disease.

Public Health Nurse. One of the newer measures adopted by all the large cities and many towns in Ontario for the further advancement of public health is the employment of a Public Health Nurse. . Dr. McClenahan, our District Health Officer, made a special visit to our Board to urge the appointment of such a nurse for Simcoe. Special training for public health work is required of these nurses, and their services are particularly valuable in Child Welfare Work and the conservation of infants' and children's lives to the State, by visiting the homes and advising mothers as to nursing, feeding, and general hygienic measures of the body, and domestic surroundings. They make pre-natal visits where possible, giving much valuable information to the expectant mother and follow up all cases of births registered with the Town Clerk and see that the infant is protected against want and negligence, thus saving many lives otherwise lost. They are also useful in visiting the schools and examining children there, for physical defects and disease. They assist in rounding up epidemics and aid in a multitude of ways the health officials, physicians and citizens at large. This matter was recommended by our Board and was passed on for the Town Council's consideration and until such time as some members of the Board of Education, councillors and more public spirited citizens could be advised of the nature of such work. The question of expense would be in the neighborhood of about $1200.00 per annum. Under such an appointment it would be possible to establish a clinic in some central place to which mothers could bring their babies and children for advice and instruction on matters relating to their health, the proper food to use and methods of preparing it. Advice also on the simpler domestic remedies to use of necessity for the preservation of health as well as the prevention of disease. There is a very wide field open for educating the masses in sanitary and hygenic instruction of even the most elementary kind, and despite the comparative improvement in the modern education noticed along these lines, it is still deplorable to witness the ignorance that exists, and no doubt the medical profession are most qualified to bear evidence of this condition by reason of the opportunity the physician has of observing the condition in the daily pursuit of his occupation. In the various towns and cities where these nurses have been established it has been possible to secure the services of some of the local physicians to devote an hour or so each week or month as the case may be, in attendance upon these clinics. Their services are given gratuitously as a public duty, in which the nurse is relieved of the more difficult caess.

Milk Supply:

The question of a pure milk supply has been one that has received a great deal of attention of late from public health officials, as well as interested citizens generally, and much popular discussion as to the best method of preparing this very important article of food for the public consumption has taken place at Medical Society meetings, Health Officers', and Child Welfare conventions, and also at public meetings held in many cities and towns throughout the country. At the recent International Child Welfare Conference held at London, England, and Brussels, Belgium, it was demonstrated in these conferences that the pasteurization of milk proves a strong factor in the reduction of infant mortality. The

apostle of the movement for the pasteurization of milk. Nathan Strauss of New York, in his paper, declares that pasteurization of milk solves the problem of destroying all germs of disease which may be in milk, but does not impair its digestibility or nutritive quality. He claimed that milk intended for infant nutriment should be pasteurized as an absolutely essential precaution and that it was a piece of criminal neglect to feed young children on milk that had not been so treated. As this method of preparing milk for public consumption is being adopted in many municipalities and is being required by by-laws in many cities and towns, the citizens of Simcoe are fortunate in having their entire milk supply pasteurized, and the process subjected to periodical inspection. The system of bringing the milk to the required temperature of heat necessary for the destruction of germ life and cooling it again rapidly has been found regular, the bottles being properly cleaned and sterilized before filling and the employees careful in the matter of cleanliness upon each inspection.

The milk which is supplied from some fifteen dairy farms has been tested monthly for butter fat, and laboratory tests are made for bacteria and dirt found in samples. The standard of butter fat 3.02% has generally been found present with but two exceptions, and as these two were again found wanting in this regard it was found necessary to discontinue this supply. It was not supposed that watering the milk was accountable for the lack of butter fat, but that the grade of cattle in these dairies was accountable for the deficiency in this particular. Two of the farm dairies have had the tubercular test applied to their herds and the infected ones eliminated. The dairy farms supplying milk to The Simcoe Sanitary Dairy have been inspected. Some defects have been found in a few cases and remedied, but the majority were found in a very satisfactory sanitary condition with cement floors kept clean, walls whitewashed, and manure piles at a proper distance. Facilities for cooling the milk by running water, clean wash basins, towels and soap for the milkers were provided and well kept in some dairies.

General.

The annual spring-cleaning notices were distributed by the Sanitary Inspector in April, to each householder, warning the citizens generally of the more important sanitary duties for each, and especially at that season of the necessity of removing the winter's collection of garbage and debris before the warm and germ-developing season approached.

The water supply has been carefully watched and the various analyses submitted have proven its purity and freedom from bacilli at each test. The Provincial Laboratory has kept our Board supplied with fresh vaccines and antitoxins, free of charge, for the use of our physicians, as well as the usual aseptic containers and swabs for use in communicable diseases.

A resolution was passed at one of the Board meetings for the Town Council's consideration, "that all houses on streets having water and sewage be required to dispense with the outside closet and install the usual sanitary flush closet." No action was taken. A great many nuisances have been reported, and the Sanitary Inspector has been instructed in each case to have the nuisance abated.

Vital Statistics:—There were 88 births, 51 males and 37 females. In 1919, births numbered 70, of which 41 were males and 39 females. In 1920, births 88, 51 being males and 39 females. Statistics have shown that during the time of

serious wars and sometime after, the male births have been relatively higher than the female. Some very vague, delicate and inexplicable natural force no doubt is accounting for the re-adjustment of this sex ratio, in consequence of the very serious reduction of the male population in the nations concerned in the conflict. Whether this force is accountable for the larger male birth-rate of our town during the last three years, may be a matter for conjecture. Philosophers and scientists no doubt have an explanation for this phenomenon to whom I will of necessity refer the question.

Deaths:—There were 58 deaths during the year recorded, pneumonia, still and premature births, apoplexy and senility being the principal causes. Cancer, tuberculosis, paralysis and peritonitis were next in frequency.

All of which is respectfully submitted.

J. C. C. Grasett, M.D.,
M.O.H.

Simcoe, Dec., 1921.

ST. CATHARINES.

St. Catharines, Ontario, November, 23rd, 1921.

Chairman and Members of Local Board of Health of the City of St. Catharines.

Gentlemen:—

I have the honor to present my Annual Report for the year ending October 31st, 1921. It is regretted that every Medical Officer of Health turns in a different kind of Report and it is hoped that after this year a regular form will be used so that the work in different cities may be compared.

Vital Statistics.

Estimated population	20,961
Death rate per thousand population (excluding still births and premature births)	12.452
Birth rate per thousand population (excluding still births and premature births)	32.632
Infant mortality rate (number of deaths under one year per thousand living births)	71.42

Meetings.

The Meetings of the Board have been fairly well attended, and have been regular each month.

Emergency ambulance.

Since my last annual report the new ambulance has been finished and has already done very valuable work. The service rendered by the St. Catharines Taxi Co., has been excellent and the drivers have responded to all calls in a very efficient manner.

The matter of emergency calls outside the City has been taken up with the various municipalities and we are now able to charge these places when the ambulance is used by them.

Milk.

There has been a regular inspection and test made each month of samples from each milk vendor. We have had very little dirty milk, and it is to be hoped that all dealers will keep up the good work. Any citizen receiving milk which looks dirty should report to the M.O.H. immediately. Every householder should have a small box with a tight cover sunk in the ground near the back door, so arranged that the driver can place the bottles of milk there. This will keep the milk cool in the summer and straw placed in the box will prevent freezing in winter. We can not expect our milk to keep well in hot weather if it has been sitting in the sun for an hour or so after it has been delivered to our door.

Flies.

Many fly proof receptacles were used this year for garbage, but there is still a great deal of room for improvement, and early next spring we should endeavour to make every householder comply with the City by-law.

Water supply.

The City's water supply has been uniformly good according to bacteriological reports received. Although there were thirteen cases of Typhoid fever reported none contracted the disease in this City.

Meat.

It would appear that the only way to avoid numerous complaints about meat would be to have a meat inspector appointed. Much of the meat sold in this City is not inspected at all, and some of the slaughter-houses in the surrounding district are in a filthy condition.

Animals on premises.

In order that there should be a proper inspection of all stables it would be necessary for the City Council to pass a By-law requiring that all cows and horses be registered.

Pigs should not be allowed inside the City at all.

Contagious diseases.

During the year the following cases of infectious diseases were reported.

Influenza	1	case	1	death
Chickenpox	28	cases	0	deaths
Diphtheria	101	"	6	"
Measles	9	"	0	"
Mumps	2	"	0	"
Smallpox	1	"	0	"
Tuberculosis	35	"	19	"
Typhoid Fever	13	"	0	"
Whooping Cough	32	"	3	"
Venereal Diseases	110	"	0	"

Diphtheria.

Some of the cases of this disease were of a very virulent type and our death rate was fairly high. Most of the fatal cases however, were not seen by a physician for some days after the illness started. The medical men here, with one or two exceptions give large doses of antitoxin and on account of this our per cent. of deaths is much lower than in most other cities. At the Isolation Hospital the routine is to give not less than 10,000 units of Antitoxin on admission unless the attending physician states otherwise. Thirty-five cases of this disease were treated in the Institution with one death, and sixty-six cases were treated at home with five deaths.

The one case which proved fatal in the hospital had been ill one week prior to admission and had not been seen by a physician.

Typhoid fever.

Every case of Typhoid was investigated and it was found that the disease had been contracted outside of the city.

Scarlet fever.

There were many cases of this disease and unfortunately we are still getting some. Many of them are so mild that a physician is not called. I have asked the physicians to placard on suspicion any sore throat and fever, if there is vomiting. If no further symptoms develop the placard will be removed at the end of three weeks.

Venereal disease.

There has been far more co-operation in reporting these diseases this year, but there are still some physicians who have not reported a single case. Owing to the prevalence of them one can only draw conclusions that the physicians are not reporting all the cases seen.

The following have been reported:—

Syphilis	42 cases
Gonorrhoea	65 "
Chancroid	3 "

Many persons suffering from these diseases are unable to pay for treatment and it is proposed to open a free clinic in this city the first week in January. This will be in charge of a local physician and a nurse will also be appointed. The Provincial Board of Health make substantial grants to a municipality where there is a free clinic.

Isolation hospital.

The following cases were treated during the past year:—

Diphtheria	35 Cases	1 Death
Erysipelas	1 "	0 "
Measles	1 "	0 "
Scarlet Fever	37 "	0 "
Smallpox	1 "	0 "
Total	75	1

I would again call your attention to the inadequate size of this building. During the past year we had to open a convalescent hospital for our Scarlet Fever patients.

The matron has done her work faithfully, and the hospital is kept in excellent condition.

During the year much labor saving electrical apparatus was installed which has made the work there much easier.

It would appear that the fees at this institution might be reduced both for city and outside cases.

Child welfare.

A Well Baby Clinic was started this year and has done very fine work. The object is to keep the well baby well, and the following report shows how much it is appreciated.

Total Attendance	653
Total Registered	173
Visited Clinic once	82
Visited Clinic twice	28
Visited Clinic more often	63

Of the eighty-two babies who came once, only seventeen had defects and these were visited after by the nurse at home.

The Public Health Nurse has devoted considerable of her time to the visiting in connection with the clinic, but much of her time is taken up going from one part of the city to another.

I would strongly advise that a motor car be considered in this year's estimates. This car could be used by the Health Nurse and Sanitary Inspector and would be of great service to them.

Garbage disposal.

During the year I have inspected the dumps used by the City, and generally speaking have found them in good condition, and care has been exercised to prevent any menace to health being caused therefrom. In particular the dump at Lock four was well covered with ashes last Spring, when the City dumping ceased and little or no danger to health could be caused there.

Recent inspection however shows that dumping has again commenced and complaints have been received as to its condition. While dumping is taking place the appearance is unsightly and some special care should be taken to prevent papers etc., from being scattered by the wind, and instructions should be given to this effect .

At the same time unauthorized dumping seems to be taking place and as may be expected no care is taken by persons so doing to prevent any nuisance arising. I would urge therefore that the City authorities prevent this. As far as Lock Four dump is concerned I would advise that before spring this be faced up with ashes and earth so as to present a neat appearance and that no more dumping take place here.

In view of the steady growth of this city and its present population I would strongly recommend that the Council take into consideration the establishment of a garbage disposal plant. We never will have a flyless town as long as we use dumps for our garbage.

Sewers.

During the year 2.3 miles of sewers were put down and 160 house connections put in. There are still some streets which should be sewered, especially the Thorold Road and Streets leading from it.

Factory ventilation.

We have received complaints about the ventilation and mode of heating some of the factories. One factory was heated with open coke fires, but the manager has assured me this practice would cease. The health of the workers should be the first consideration of the manufacturer.

Laboratory.

At present there is equipment at the G. and M. Hospital to do ordinary microscopic work, including the examination of throat swabs, but this district should have a far better equipped laboratory and I would ask your Board to take up this matter with the Provincial Board of Health.

At the same time the matter of a course for the Sanitary Inspector should be considered.

Inspection of schools.

During the year I inspected all the Public Schools in the city as ordered by the Provincial Board of Health. A detailed report is being prepared and will be available at our next regular meeting, and a copy will be sent to the Board of Education.

Most of the schools were in excellent condition, clean and tidy, but they were nearly all over crowded.

In none of the schools were both soap and sanitary towels provided for the use of pupils—and in several schools neither of these useful articles were on hand.

Office.

Without a separate office it is impossible for the Board of Health work to be done efficiently. This matter should receive your consideration.

If files and statistics are to be kept correctly a proper place should be provided.

All of which is respectfully submitted.

D. V. CURREY,
Medical Officer of Health.

To the Chairman and Members of the local Board of Health of the City of St. Catharines.

Gentlemen:—

I herewith submit my Annual Report from November 15th, 1920 to November 15th, 1921 inclusive.

Attached to this Report is a list of all deaths and their causes during the year, also a summary of their ages at the time of death.

I also submit a list of diseases classes as contagious as reported by the Medical Practitioners of the City numbering 561 cases and 31 deaths, from the several diseases.

The population as returned by the Assessment Commissioner for 1921 is 20,961 an increase of 1101 over 1920.

The Sewer System of the City has been enlarged and the Trunk Sewer completed and the City now has a good sewerage system in nearly every portion of the City.

The garbage collection is working satisfactory, tons of garbage and refuse being taken from the City daily.

All of which is respectfully submitted.

J. ALBERT PAY,
Secretary local Board of Health.

Births reported from November 15th, 1920 to November 15th, 1921.

Births Reported from November 15th, 1920, to November 15th, 1921.		
Males	Females	Total
365	349	714

Decrease of eleven less than 1920.

Marriages 260 being 35 less than 1920.

Deaths 317 being 17 less than 1920.

Deducting stillborn and premature the death rate is 12.452.

Death rate being 15.123 per 1000 of total deaths.

CONTAGIOUS DISEASES REPORTED.

	Cases	Deaths
Scarlet Fever	229	2
Diphtheria	101	6
Typhoid Fever	13	0
Chickenpox	28	0
Mumps	2	0
Whooping Cough	32	3
Tuberculosis	35	19
Measles	9	0
Smallpox	1	0
Influenza	1	1
Venereal Diseases	110	0
	561	31

NUMBER OF DEATHS AND CAUSES, FROM NOVEMBER 15th, 1920, TO NOVEMBER 15th, 1921.

Scarlet Fever	2	Diarrhoea Enteritis under two years	6
Whooping Cough	3	Diarrhoea Enteritis two years and over	2
Diphtheria	6	Appendicitis	3
Influenza	1	Intestinal Indigestion	1
Septicaemia	7	Colitis	1
Tuberculosis Lungs	19	Cholera Infantum	1
Tubercular Meningitis	40	Cirrhosis Liver	3
Cancer Stomach	11	Jaundice	1
" Liver	1	Biliary Colic	1
" Pancreas	1	Acute Cholecystitis	2
" Intestines	4	Peritonitis Simple	1
" Uterus	2	" Tubercular	1
" Breast	4	Recto-Vaginal Fistula	1
" Face	1	Acute Nephritis	1
" Neck	1	Brights Disease	6
" Throat	1	Pyelitis	1
" Prostate	2	Prostate Hypertrophy	2
Ovarian Tumor	1	Puerperal Toxaemia	2
Arthrites	1	" Abortion	1
Diabetes	4	Difficult Labor	2
Anaemia	2	Pernicious Vomiting	1
Alcoholism	3	Acute Abscess Axilla	1
Meningitis	4	Congenital Malformation	2
Myelitis-transerse	1	Spina Bifida	2
Apoplexy	12	Permature Birth	25
General Paralysis	1	Icterus Neonatorim	1
Insanity Acute	1	Melaena "	1
Convulsions Infant	4	Malnutrition	5
Pericarditis	1	Injury by Forceps Birth	1
Acute Endocarditis	1	Senility	14
Organic Heart Disease	11	Accidental Poisoning	1
Chronic Valvular "	6	Accidental Drowning	2
Myocarditis	9	Accidental Firearms	1
Fatty degeneration	1	Accidental by Tack	1
Angina Pectoris	2	Accidental by Fall	4
Arterio Sclerosis	7	Accidental by Railway	1
Laryngitis	1	" by Trolley	4
Bronchitis Acute	3	Accidental by Sunstroke	2
" Chronic	5	Accidental by Electricity	1
Pneumonia Broncho	10	Unknown	4
" Lobar	1	Still Births	25
Pneumothorax	1		
Ulcer Stomach	1	Total	317
Indigestion Acute	1		
" Chronic	1		

AGES AT THE TIME OF DEATH.

Still born	25
Premature Births	31
From Births to 6 Months	37
" 6 months to 1 year	10
" 1 year to 2 years	5
" 2 years to 5 years	7
" 5 years to 10 years	8
" 10 years to 15 years	10
" 15 years to 20 years	9
" 20 years to 25 years	10
" 25 years to 30 years	10
" 30 years to 35 years	5
" 35 years to 40 years	6
" 40 years to 45 years	8
" 45 years to 50 years	8
" 50 years to 55 years	15
" 55 years to 60 years	13
" 60 years to 65 years	14
" 65 years to 70 years	18
" 70 years to 75 years	22
" 75 years to 80 years	21
" 80 years to 85 years	12
" 85 years to 90 years	6
" 90 years to 95 years	7
	317

STRATFORD.

To the Chairman and Members, of the Local Board of Health.

GENTLEMEN:—

It is my duty and pleasure to again submit to you my report on the sanitary condition of the city during the past year, such duty is in accordance with the Provincial Medical Act.

I find there were registered with the City clerk, 506 births, 198 marriages and 267 deaths.

We have had on the whole a very satisfactory report of communicable diseases, the total number being seventy-four with seven deaths, a very good record. Scarlet fever leads, there being thirty-three cases with two deaths. Diphtheria takes second place with twenty-three cases and one death. Spinal meningitis five cases with one death. Consumption three cases with three deaths. The number of premature or still births is very large, there being twenty-five cases reported. I find of the deaths recorded there were thirty-one who had reached the three score and ten the termination of their lives being reported from various causes.

Your Board is be congratulated upon the attendance of the members at the regular and special meetings.

Our city has now arrived at the size where it is necessary to make provision for the care and treatment of those afflicted with contagious disease. This has given the Board a great deal of thought and consideration during the past year and it is to be hoped that the ratepayers will show their appreciation of your efforts by voting for the by-law which you are submitting to them to raise the necessary funds for the erection of this much needed institution.

We desire to thank all the different societies, organizations and personal assistance given in efforts to help mitigate disease. The clinic seems to be giving satisfaction as reports so far seem favorable.

Respectfully submitted.
(Sgd.) J. A. ROBERTSON,
Medical Officer of Health.

To the Chairman and Members, of the Local Board of Health.

GENTLEMEN:—

In presenting my annual report, I am greatly pleased to be able to state that we are still making progress in the better sanitation of the City. We have, I believe, the cleanest, most sanitary and beautiful city in Ontario. We must give credit to the Park Board for the great improvements they have made from year to year in making sanitary and beautifying every nook and corner of their somewhat extended park system: and I am sure their efforts are appreciated by the citizens of Stratford.

The Horticultural Society are also deserving of praise for the part they have taken in making our burg a "City beautiful" by locating flower beds in so many places. Last year I drew the attention of the Board to the fact that in some of the residential parts of the City there were ancient stables standing quite close to the street. Some of these are still with us and are both unsightly and unsanitary and ought to be removed, and would suggest that some action be taken to remove the nuisance.

Our garbage collection is proving a boon to the City in bettering sanitary conditions, but in order that this scheme may be perfect, all householders must help in the work by providing suitable receptacles with tight fitting covers for the gar-

bage, and also proper cans for ashes. The Incinerator is giving good satisfaction, but I would suggest that householders have all garbage as dry as possible with the liquid matter drained off, and the remainder wrapped in paper before depositing in can.

I have inspected streets, yards and lanes many times during the year and find that most people are interested in keeping their yards clean; yet there are some who do throw refuse into yards. The abolition of many outside closets has added greatly to the appearance and sanitation of the City. There have been eighty houses modernized this year, but the high cost of materials etc. has prevented many from complying with by-law.

I inspected the laundries, bake shops, butcher shops, slaughter houses, restaurants, and all places where human food is handled. I inspected junk yards, dumping grounds and every part of the City many times during the year. I had removed off the streets several dogs that had been killed by motor cars, etc., collected samples of milk and tested same, and found it up to the standard. Inspected the dairies and found them well kept. I took samples of water from several taps in different parts of the City and had them sent to Provincial Analyst; same being reported as pure. I disinfected ninety-seven houses where contagious diseases existed, and took every precaution to prevent the spread of disease by carrying out the rules and regulations of the Provincial Board of Health.

Gentlemen, hoping this report will meet with your approval, I have the honour to be,

Your obedient servant,

(Sgd.) THOS. DUNSEITH,

Sanitary Inspector.

ST. THOMAS.

DR. JOHN W. S. MCCULLOUGH,
Chief Provincial Health Officer,
Toronto, Ontario.

DEAR SIR:—

The following is a report of the Medical Officer of Health for the year ending December 31st., 1921.

The year 1921 was an uneventful year in Health work in St. Thomas with these exceptions.

1st., The construction of a large dam on Kettle Creek making an artificial lake covering about 30 acres to increase the water supply for the City and its suburbs.

2nd. The establishment of a Baby Clinic.

3rd., A severe epidemic of Smallpox.

This City has for about 30 years had their supply of water from Kettle Creek. A large storage basin had been constructed with capacity of about 8000000 gallons and this augmented when necessary by water from the stream which was kept in reserve by a dam.

This water which was chlorinated, oxygenated and coagulated formed an adequate supply until the present, but owing to increased demand for water in newer parts of the City and from the suburbs the water commissioners with a wise foresight looked into the most practical plans for increasing this supply.

Plans were considered to bring the water from Lake Erie, a distance of about 10 miles or of erecting a dam further up Kettle Creek at an advantageous site.

After considerable deliberation on the part of the commissioners and with expert advice, it was decided to adopt the latter plan.

A very strong dam was erected at the site selected and St. Thomas has now an abundant clean pure water supply, capable it is estimated of supplying a City of 50,000 population.

Mr. A. F. McLachlin F.C.I.C., a competent and trained analyst makes frequent analyses of the water.

A Baby Clinic was opened here on March 31st., 1921, and was held every Thursday afternoon throughout the year.

The average attendance was 215 with 130 babies on the register. 119 cases were referred to their own doctors for treatment.

Four deaths occurred during the year among the number that were registered.

Miss Riddell P.H.N. is deserving of great credit for the valuable services she rendered in establishing the Clinic.

Miss Cameron P.H.N. was engaged by the Board of Health for the last three months of the year and did a good work which was much appreciated by the Board.

The Red Cross organization of this City did all the voluntary work and certainly are deserving of the highest praise for the unselfish and earnest efforts put forth by them which made the Clinic such a great success throughout the year.

Owing to errors in diagnosis and to unreported mild cases, a very severe epidemic of Small-pox began during the latter part of December 1920 and January, 1921 and continued until the latter part of March 1921. After compulsory vaccination of the children in the Public Schools and students of the Collegiate Institute had bee instituted, the epidemic subsided rapidly.

Some lessons to be learned from this epidemic to my mind are the following:—

The great value of vaccination is once more proven. There were over 70 cases treated in the Isolation Hospital here, none were vaccinated.

Physicians should endeavour to have all babies under their charge vaccinated at 3 months of age. They should be re-vaccinated at school age again.

Chicken-pox should be quarantined and placarded.

Analyses of all the milk supplied to the City were made 4 times during the year besides individual analyses made many times, as circumstances indicated.

The dairies and herds were inspected twice during the year by the Sanitary Inspector and Dr. Ball, Veterinarian.

Great improvement is being shown in the quality and cleanliness of the milk supplied to the City.

About ⅓ of the milk supply is pasteurized.

Cases of Small-Pox, Scarlet Fever, Diphtheria, Measles reported to me for 1921.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Small-pox:													
Cases	35	43	25	11	1	1	0	0	0	0	0	1	117
Deaths	No deaths throughout the year.												
Diphtheria:													
Cases	27	18	22	18	15	16	13	12	31	10	10	..	192
Deaths	2	2	1	0	0	1	0	1	0	1	0	..	8
Scarlet Fever:													
Cases	7	10	2	2	2	5	1	7	2	5	..	..	43
Deaths	No deaths throughout the year.												
Measles:													
Cases	95	33	2	0	0	0	0	1	0	0	..	..	131
Deaths	0	1	0	0	0	0	0	0	0	0	..	..	1

Yours truly,

DR. MCKILLOP, M.O.H.
Per M.E.L.

SUDBURY

To the Chairman and Members of the Board of Health,

Town of Sudbury, Ontario.

GENTLEMEN:—

We have the honour to submit to you the report of sanitary work done under your Board from November 30th, 1920 to November 30th, 1921.

The total number of loads of garbage and other waste delivered at the Incinerator and destroyed were as follows:

Garbage and other waste 3269 loads, 21 Horses, 26 Dogs, 4 Cows, 1 Calf, 3 Lambs, 7 Pigs, 7 cases Eggs, 1150 lbs. Beef, 23 Boxes Sausage, 2½ bbls. Pork, 750 lbs. Fish.

These figures show a considerable increase on the previous year, garbage alone showing an increase of 771 loads.

The incinerator fire-box is, and has been for some time, in need of repairs but the work has been held up in the hope that a large incinerator, which is badly needed, would be installed. The present incinerator will not handle the refuse next year if the increase continues.

The garbage contract has been handled in a very efficient manner and complaints have been very few and in all cases have been enquired into and remedied the day they were received.

Plumbing permits.

One hundred and two permits were issued during this period. Thirty-two of these were for repairs, alterations and additions, the remainder being for new connections to the sewer. All of this work was inspected and passed when satisfactorily completed.

Water.

Sixty-one samples were collected and forwarded to Toronto and North Bay during this period. During the months of August and September the supply was not satisfactory. More chlorine was added, however, and at present the supply is satisfactory. In addition to the ordinary samples, we have forwarded some seventy-five daily samples to the Experimental Laboratories at Toronto, but the reports on these have not yet been received.

Milk supply.

One hundred and three samples of milk have been collected and tested. The dairymen are using every effort to supply good milk and to keep up an adequate supply. There is no danger of a milk shortage during the coming winter as the Creighton supply has been secured by our dairymen. Dairies have been regularly inspected, and improvements suggested, particularly in one case, were quickly carried out. The average percentage of butter fat was 3.62, so that the quality of our milk is well over the standard required by law.

Infectious Diseases.

There were twenty-eight cases of smallpox, six cases of scarlet fever and sixty-seven cases of diphtheria reported during this period. In all cases quaran-

time regulations were enforced and the premises fumigated on completion of quarantine period. There were ten deaths from diptheria. Four cases of small-pox and one of diphtheria were placed in the Isolation Hospital which, by the way, has been closed since June 29th. We wish to point out that the need of an efficient Isolation Hospital is very great, as there is no means at present of coping with an epidemic should one arise. During the year one hundred and eighty-two cases of venereal disease have been reported to the Medical Health Officer.

The night soil contract has been well carried out and complaints have been very few. This has been one of the greatest difficulties facing this department in previous years. The new wagon purchased last spring has been the greatest factor in this improvement, as has been the bi-monthly collection.

Collections for the year were:

Amount paid to Contractor:—			
1002 @ 60c.			$ 601.20
5049 @ 70c.			3,534.30
13 Camps @ $1.00			13.00
			$4,148.50
By Cash Collected		$3,010.30	
Cash to Town:—			
1002 @ 70c.	$ 100.20		
5049 @ 20c.	1,009.80		
		1,110.00	
			4,120.30
Outstanding			$ 28.20

Food has been well handled on the whole. There is still room for a little improvement in the wrapping of meat, particularly that which comes from the farmers in the district. Every effort is being made to get in touch with them and urge the necessity of better wrapping.

The regular inspection of Lodging houses, abattoirs, restaurants and all stores handling food of any kind, has been carried out.

The Town has been regularly inspected during the year and all complaints have been investigated properly and rectified wherever possible.

We wish to thank the Town Council, the Board of Health and the general public for the help and courtesy given us in the execution of our duties.

All of which is respectfully submitted.

W. J. Cook,
Medical Officer of Health.

F. Rotheny,
Sanitary Inspector.

WELLAND.

WELLAND, ONT., January, 1922.

DR. MCCULLOUGH,
Prov. Board of Health,
Toronto, Ont.

Dear Sir:

I beg leave to submit my annual report for the year 1921.

I am pleased to state that the city has been comparatively free from any serious epidemic of disease, and that there has been on the whole less sickness than usual during the year. There have been a few cases of typhoid fever, four having been reported to me, with no deaths. This is no doubt due to the fact that the canal water always shows colon bacilli, and is so frequently muddy that it is difficult to make it absolutely safe by chlorination. Until we have a supply of clean water, an occasional case of typhoid will be unavoidable in spite of chlorination. The dirty condition of our water is one of the worst features of the City, as nothing is so essential to the health of the people as an abundant supply of pure clean water for drinking purposes. Every effort should be made by the Municipality to have the proposed pipe line built by the Government, so that this defect may be remedied.

Twenty-two cases of diphtheria have been reported during the year with three deaths. Six of these were in the month of January, the others occuring during various months. There were 10 of scarlet fever, the majority of them mild and no deaths from this disease occurred. This disease has been very prevalent throughout the Province and we have been fortunate to have so few cases. A widespread epidemic of whooping-cough occurred during the summer and one death resulted.

109 deaths were recorded for the year, 31 of these occurring at the Hospital, of which many were from outside the city limits. This gives a death-rate of 12.3 which is somewhat below the average. This number does not include the still-births of which 13 were reported.

The sanitary condition of the city is on the whole very satisfactory, and the instances of complaints of public nuisances are steadily growing less frequent. One of the greatest difficulties encountered by the Sanitary Inspector is in the enforcement of the law regarding manure heaps. Many people will not go to the trouble and small expense necessary to protect the manure from flies.

The Inspector has visited all dairies during the year and reports that there is a steady improvement in conditions and a willingness to conform to the by-law. The milk supply, with the exception of one dealer, is all pasteurized, and thus rendered safe from tubercular and other disease germs. It is becoming increasingly more difficult to keep the butter-fat up to the requirements of the by-law, due to the fact that cows are being bred rather for quantity than quality of milk.

The vital statistics for the past three years have shown that our death rate among children under one year has been very high, and I determined early in the year to make an effort to inaugurate child welfare work and Public Health Nursing. I applied to the Provincial Board requesting them to send one of the District nurses to the city to inaugurate the work. Miss Hamilton arrived in April and at once began a campaign. At the same time I had two representatives from the Provincial Board visit the city, who addressed the Rotary Club and a

Public meeting, informing the citizens of the importance of the work, and creating an interest in the subject.

As a result of Miss Hamilton's splendid organizing abilities, the first baby clinic was held in the latter part of May with an attendance of about 40 babies, and proved an unqualified success. These clinics are known as well baby clinics, the object being to prevent them from becoming sick, by a weekly supervision by the nurse and physician to ascertain whether they are making the correct gain in weight, seeing that they are receiving the proper kind and amount of food and giving instructions as to their care, etc. Sick babies are not treated but are referred to their regular physicians.

Application was made to the Council for a grant to provide a Public Health Nurse, which they very generously made, and Miss Anna M. Oram was appointed, and took charge on the first of June. She has proved a most capable and efficient worker, as her report which I append will show. The attendance and interest in the weekly clinics has grown steadily, and from information I have received, I believe we have the most succesful baby clinic in the Province. A large amount of the credit of this must be given to Miss Oram, the different nurses in the City who have kindly assisted at the clinics, Doctors Boyd and Reive who have given their services each week free of charge, and lastly to the members of the various Home and School Clubs, who have so generously furnished tea and refreshments to the mothers attending the clinic.

It is a source of much gratification to be able to report that the death rate among children under one year, is just about one half of that for the past two years, and instead of a rate of 161 per 1000 births, this year the rate is 82 per 1000 births. There have been 22 deaths during the year, 4 of which were premature births. 267 births were reported for the year. While one cannot fairly claim that the reduction was entirely due to child welfare work, there is no doubt that it was an important factor, as only three deaths among the 180 babies on the clinic roll, occurred.

Report of Public Health Nurse.

Miss Anna M. Oram.

Report for seven months, June 1st to December 31st, 1921.

Number of visits made, 1429, a monthly average of 204.

Monthly average of pre-natal visits	180
Number of babies on clinic roll	180
Total attendance at Baby clinic	886
Weekly average attendance	31
Number of deaths of clinic babies	3

This work has been made possible by the excellent co-operation of the physicians and citizens of Welland and the splendid help given me by the various Home and School Clubs of the City.

Anna M. Oram.

I must express my gratitude to the members of the Board of Health for their interest and hearty co-operation in the work of the year.

All of which is respectfully submitted.

J. H. Howell, M.O.H.

March 21, 1922.

WOODSTOCK.

To the Chairman and Members, Board of Health, Woodstock, Ontario.

Gentlemen:—

Below please find report of the Medical Officer of Health for the year ending October 31st, 1921.

Population (Assessor's figures) 10,164.

Births registered (exclusive of Still Births) 214. Nineteen of which were non resident.

Deaths (exclusive of Still Births) were 142, fourteen of which were non-resident. This would give a death rate of 12.6 per thousand population.

DEATHS.

I. GENERAL DISEASES.

Anaemia, pernicious	5
Scarlet Fever	1
Influenza	1
Diabetes	1
Anaemia (Splenic)	1
Whooping Cough	2
Hyper Thyroidism	2
Tuberculosis-Lungs	1
Quinsy	1
	15

Carcinoma:—

Throat	1
Urinary Bladder	1
Forehead	1
Stomach	2
Mesenteric Glands	1
Breast	1
Colon	1
Prostate Gland	1
Uterus	1
Location not stated	1
	11

II. DISEASES OF THE NERVOUS SYSTEM.

Hemiplegia	6
Apoplexy	5
Cerebral Hemorrhage	3
Chronic Hysteria	1
	15

III. DISEASES OF THE CIRCULATORY SYSTEM.

Endocarditis	5
Acute Dilatation	3
Myocarditis	4
Chronic Valvular Disease	6
Angina Pectoris	1
Mitral Regurgitation	2
Adam's Stokes Heart Block	1
	22

IV. DISEASES OF THE RESPIRATORY SYSTEM.

Pneumonia	6
Oedema of Lungs	1
Chronic Bronchitis	2
	9

V. DISEASES OF THE DIGESTIVE SYSTEM.

Intestinal Obstruction	1
Cholelithiasis	1
Appendicitis	3
Cirrhosis of Liver	2
Gallstones	2
Colitis	1
Gastric Ulcer	2
Acute Indigestion	1
	13

VI. DISEASES OF GENITO URINARY SYSTEM.

Chronic Cystitis	1
Bright's Disease	1
Chronic Nephritis	3
	5

VII. DISEASES OF THE PUERPERAL STATE.

Septicaemia (childbirth)	1
Ectopic Gestation (septicaemia)	1
	2

VIII. DISEASES OF THE SKIN.

Gangrene of foot	2

IX. MALFORMATIONS.

Congenital Heart	2
Spina Bifida	1
Imperforate Anus	1
Acephalus	1
	5

X. DISEASES OF EARLY INFANCY.

Premature	7
Patent Foramen Ovale	1
Marasmus	1
Inanition	8
Malnutrition	1
Debility (infantile)	1
Mitral Regurgitation	1
Acute Indigestion	1
Strangulated Hernia	1
Meningitis	2
Gastro-enteritis	3
Asphyxia (unknown cause)	1
	28

XI. DISEASES OF OLD AGE.

Senile Decay	5
Debility, General	10
	15

XII. EXTERNAL CAUSES.

Accidental injury, being struck by a board from a circular saw	1
Accidental smothering in cot	1
Accidental injuries by caving in of trench	1

Murdered	1
Suicide by drowning	1
Hanging (legal)	1
Killed at railway crossing	1
Killed by automobile	1
Accidental injury to head	1
Accidental burns	1
	10

COMPARATIVE TABLE.

Showing Number of Deaths During 1921 Within the Following Age Points.

Still Births	7
Premature Births	7
Under one year	22
From 1 to 10 years	4
" 10 to 20 "	2
" 20 to 30 "	5
" 30 to 40 "	6
" 40 to 50 "	5
" 50 to 60 "	13
" 60 to 70 "	21
" 70 to 80 "	28
" 80 to 90 "	20
" 90 to 100 "	5
Over 100 years	1
	149

SUMMARY OF COMMUNICABLE DISEASES REPORTED FROM NOVEMBER 1920 TO OCTOBER 31st 1921

Diseases	1920		1921										Totals
	November	December	January	February	March	April	May	June	July	August	September	October	
Diptheria	1	1	4					3				1	10
Scarlet Fever	1	1	5	2	2						1		12
Typhoid Fever	1									1	4	4	10
Mumps	2		1	7	47	42	19	24	12	1			155
Tubercolosis		1	1										2
Smallpox			1		3	3							7
Measles										1		1	2
Erysipelas			1		1								2
Whooping Cough				12	11	4	2	5			1		35
Chickenpox							3	1	1				5
Encephalitis Lethargica								1					1
Totals	5	3	13	21	64	49	24	34	13	3	6	6	241

No severe epidemic of communicable diseases has occurred this year, though mumps in a mild form has been prevalent and although fairly well reported, still there were many cases not reported and I would again remind the general public that it is their duty to report promptly all cases of communicable disease.

The odd cases of small pox is a reminder that vaccination laws should be enforced. At present there are over 100 children attending our public schools who have never been vaccinated and I have so reported to the Board of Education.

Milk Supply.

The large percentage of our milk is now supplied by the Woodstock Dairy which has proper facilities for giving the public a pure wholesome product. The various sources of milk supply to the dairy were inspected and all found to be in good condition.

Meat Supply.

Our meat shops are invariably supplied with government inspected meat.

Most of the slaughter houses were found to be much below the standard set by the Provincial Board of Health.

Sanitation.

Much has been accomplished in improved sanitation by the completion of the South Trunk Sewer and the Sewage Aeration Tank which was officially put into operation May 24th, 1921.

Our sewage disposal plant where sewage is treated by the activated sludge system represents one of the first attempts in Canada to use this system on a large scale.

Some time after the plant was put in operation difficulties were encountered, necessary adjustments made and at the present time the activated sludge process is giving entire satisfaction.

During the year various districts have been supplied with sewers and I strongly advise the elimination of the outside closet where sewers are available.

I would again recommend that some efficient system of inspection of all plumbing be adopted.

The City's water supply though abundant is not above suspicion as to purity, and appropriate measures may have to be taken that will for all time ensure us of an absolutely safe water.

The various garbage dumps have come in for much adverse criticism. If garbage dumps are to be continued, effective means must be taken to keep them in proper condition, otherwise the construction of an incinerator is the only solution.

F. S. RUTTAN
Medical Officer of Health.

WOODSTOCK, ONTARIO.

November 15th, 1921.

Fifty-Fourth Annual Report

OF THE

INSPECTORS OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals for the Insane Feeble-minded and Epileptics

OF THE

PROVINCE OF ONTARIO

Being for the Year ended 31st October

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO
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1923

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LIMITED
TORONTO
CANADA

PARLIAMENT BUILDINGS,

Toronto, November 22nd, 1923.

To His Honour HENRY COCKSHUTT,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fifty-fourth Annual Report upon the Ontario Hospitals for the Insane, Feeble-minded and Epileptic, being for the official year ending on the 31st of October, 1921.

I have the honour to be,

Your Honour's most obedient servant,

LINCOLN GOLDIE,
Provincial Secretary.

Office of the
Inspector of Prisons and Public Charities, Ontario.

Parliament Buildings,
Toronto, November 21st, 1923.

Sir,—I have the honour to transmit herewith, to be presented to His Honour the Lieutenant-Governor, the Fifty-fourth Annual Report upon the Ontario Hospitals for the Insane, Feeble-minded and Epileptic, being for the official year ending 31st October, 1921.

I have the honour to be, Sir,

Your obedient servant,

W. W. Dunlop,
Inspector.

Hon. Lincoln Goldie,
Provincial Secretary of the Province of Ontario, Toronto.

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INTRODUCTION

Of W. W. Dunlop, Inspector of Prisons and Public Charities, for the year ended October 31st, 1921.

The Annual Report of the Ontario Hospitals for the year ended October 31st, 1921, includes the Reports on the Insane, Feeble-minded and Epileptic populations of the Province. For some years past separate reports have been made of the Insane and of the Feeble-minded and Epileptics. As the several Hospitals are a unit under one general system of management, and as patients are freely transferred from one to the other, and for the sake of giving a full statement of the operations of all the Hospitals, it has been judged better to include the operations of all the Provincial Hospitals in one volume. Where necessary we have also included the insane population of the Psychiatric Branch of the Ontario Reformatory at Guelph in order to show the complete insane population of the Province.

Movement of Patients.

The total number of patients treated in the Ontario Hospitals during the year was 9,495. The number admitted was 2,268, of whom 1,141 were males and 1,127 females. The total number in residence on October 31st, 1921, was 7,967, an increase over 1920 of 278 patients.

This is a large increase for one year and can be explained partly as being one of the issues of an age of war. While this is true in the general sense, there are tendencies both in business and in society that prepare the way for mental collapse.

The National Council for Mental Hygiene in the United States calls attention to the conditions that tend to mental and moral collapse. Among these may be mentioned the mania for wealth, the craze for publicity, the loss of confidence in spiritual leadership, the wild enthusiasm out of all proportion to the importance of the matter in hand, especially in regard to sport; the mania for modern dancing and the disregard of the Golden Rule as a working principle in life. Any student of social questions can bear witness to the fact that similar conditions in a lesser degree exist in Canada. The strain of modern life is felt by the strongest and best balanced temperament. It is not remarkable, therefore, to find that the part of the population who lack this endowment are forced to yield to the grim pressure of circumstances and find their only safety in a public institution.

In making comparisons, statistics alone may lead to an erroneous conception unless other facts are considered. Thirty years ago, to be an inmate of a Provincial Asylum carried with it a definite stigma. With the introduction of hospital methods, part of that reproach has been removed and the consequences are that the public hospitals have become more popular, and in proportion to the population more persons sought admission in 1921 than in 1891. This will, in part, account for the increased percentage of patients when compared with the limited increase in the general population.

Census of the Insane.

The year 1921 was the Canadian decennial census year. The census reports the entire population of the Dominion as being 8,788,483, and of Ontario as 2,933,662.

In the Report for 1893, a table was published showing the ratio of the insane to that of the general population. We give below a similar table:—

	Population of Ontario	Number of Inmates in Hospitals	Proportion of Insane, etc., per 1,000 of population
1891	2,114,321	3,468	1.64
1921	2,933,662	8,156	2.74

The figures 8,156 represent the total number in the Ontario Hospitals on December 31st, 1921, and has been selected in order to make a comparison with the insane population of the Dominion of Canada for the same period. From reports received from the several Provinces, we find that the insane population of the Dominion on December 31st, 1921, was 21,010, or 2 7/10 persons per thousand of the general population.

In the thirty years, from 1891 to 1921, the population of the Province increased 819,341, or 38 per cent. In the same period the insane population of Ontario increased by 4,688, or 135 per cent.

In forty States of the American Union, the insane population increased 468 per cent., and the general population by 110.8 per cent. Statistics may convey a meaning or otherwise to the general reader, but to students of social conditions these figures must have but one effect, and that is the decay of citizenship and the failure of Democracy to keep the people in a sane condition. The causes are deep, and no superficial remedies will remove them. If the world has been made safe for Democracy, which may be doubted, it is quite certain that Democracy, in its turn, has not been able to save the nations from the influences that have wrecked both ancient and modern empires.

REVENUE.

	1920	1921
From Paying Patients	$326,350 89	$390,575 68
From Farm and Miscellaneous	169,309 47	415,000 79
From Perquisites	.....	294,314 50
From the Municipalities, under Chapter 9, 6 Edward 7th.	127,330 00	127,697 10
From the Municipalities for removal of the insane and prisoners	.....	16,697 76

It will be seen from the above figures that notwithstanding the financial uncertainties, the Department has succeeded in collecting larger revenues than at any former period.

The local changes and improvements in the several hospitals are fully set forth in the introductions to the reports of the eleven hospitals, and are well worth perusal by all who are interested in the management of public institutions.

W. W. Dunlop,
Inspector.

TABLE

Showing the movements of the Hospital population

	Brockville Hospital.			Cobourg Hospital.		
	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	373	353	726	.....	450	450
In Residence, Oct. 31st, 1920	379	380	759	.....	327	327
Admitted during year 1921:—						
By Warrant	1	1	2	.....	26	26
By Medical Certificate	98	109	207	.....	67	67
Voluntary	.....	.....	.....	.....	.....	.....
Total number under treatment during year	478	490	968	.....	420	420
Discharges during year:—						
As recovered	30	38	68	.....	3	3
As improved	26	23	49	.....	8	8
As unimproved	11	4	15	.....	.....	.....
As not insane	0	0	0	.....	.....	.....
Total number discharged during year	67	65	132	.....	11	11
Died	28	28	56	.....	22	22
Deported	3	1	4	.....	2	2
Eloped	0	0	0	.....	.....	.....
Transferred	0	0	0	.....	.....	.....
Total number admitted since opening of Hospital	2,167	2,130	4,297	.....	421	421
Total number discharged since opening of Hospital	903	938	1,841	.....	11	11
Total number died since opening of Hospital	736	629	1,365	.....	26	26
Total number deported since opening of Hospital	18	12	30	.....	2	2
Total number eloped since opening of Hospital	101	2	103	.....	.....	.....
Total number transferred since opening of Hospital	29	153	182	.....	.....	.....
Total remaining in Hospital, Oct 31st, 1921	380	396	776	.....	382	382
Number of applications on file	6	11	17	.....	3	3
Daily average population	378.9	388.4	767.3	.....	364	364
Collective days' stay of all patients in residence during year	138,320	141,798	280,118	.....	132,973	132,973

No. 1.

for the year ended October 31st, 1921.

Hamilton Hospital.			Kingston Hospital.			London Hospital.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
656	639	1,295	311	268	579	.....	.....	.....
639	582	1,221	322	268	590	590	596	1,186
63	30	93	2	.....	2	17	8	25
96	113	209	71	72	143	113	142	255
13	1	14	.....	.....	.....	.....	.....	.....
811	726	1,537	395	340	735	720	746	1,466
22	29	51	16	8	24	26	32	58
36	58	94	29	32	61	35	31	66
8	4	12	32	4	36	10	4	14
.....	.....	.....	.....	.....	.....	.....	.....	.....
66	91	157	77	44	121	71	67	138
67	54	121	19	22	41	58	63	121
1	2	3	.....	.....	.....	1	.....	1
7	.....	7	1	.....	1	6	1	7
71	150	221	.....	.....	.....	.....	.....	.....
4,301	4,139	8,440	3,339	2,769	6,108	4,647	4,361	9,008
1,679	1,888	3,567	1,623	1,366	2,989	2,061	1,998	4,059
1,502	1,321	2,823	1,037	817	1,854	1,572	1,412	2,984
76	13	89	15	6	21	18	8	26
157	11	168	120	1	121	163	18	181
288	477	765	246	305	551	249	310	559
599	429	1,028	298	274	572	584	615	1,199
6	7	13	2	3	5	.....	.....	.....
630	481	1,111	292.2	266.8	559	572	597	1,169
229,895	175,631	405,526	106,650	97,371	204,221	208,803	218,244	427,047

TABLE

Showing the movements of the Hospital population

	Mimico Hospital.			Penetang Hospital.		
	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	300	300	600	166	203	369
In Residence, Oct. 31st, 1920	311	308	619	158	196	354
Admitted during year 1921:—						
By Warrant	28	14	42	15	9	24
By Medical Certificate	35	38	73	2	6	8
Voluntary	.....	.....	.....	.....	1	1
Total number under treatment during year	374	360	734	.....	.....	.....
Discharges during year:—						
As recovered	13	14	27	.....	.....	.....
As improved	9	7	16	.....	.....	.....
As unimproved	1	2	3	2	.....	2
As not insane	.....	.....	.....	.....	.....	.....
Total number discharged during year	23	23	46	2	.....	2
Died	28	15	43	7	6	13
Deported	1	0	1	.....	.....	.....
Eloped	2	0	2	1	.....	1
Transferred	18	16	34	.....	4	4
Total number admitted since opening of Hospital	2,292	2,053	4,345	362	430	792
Total number discharged since opening of Hospital	799	719	1,518	21	22	43
Total number died since opening of Hospital	711	582	1,293	138	173	311
Total number deported since opening of Hospital	55	11	66	10	1	11
Total number eloped since opening of Hospital	60	1	61	16	2	18
Total number transferred since opening of Hospital	365	434	799	12	30	42
Total remaining in Hospital, Oct. 31st, 1921	302	306	608	165	202	367
Number of applications on fyle	19	15	34	.....	.....	.....
Daily average population	307.07	306.82	613.89	163.91	194.25	358.16
Collective days' stay of all patients in residence during year	112,081	111,990	224,071	56,538	70,481	127,019

No. 1—*Continued*

for the year ended October 31st, 1921

Toronto Hospital.			Whitby Hospital			Guelph Hospital	Orillia Hospital		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Male.	Female.	Total.
.....	.....	.....	550	460	1,010	.....	536	563	1,099
251	330	581	417	450	867	.....	501	482	983
105	66	171	56	3	59	71	11	2	13
169	295	464	61	48	109	.....	93	62	155
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
525	691	1,212	534	501	1,035	.....	605	546	1,151
36	51	87	4	8	12	.....	.....	.....	.....
57	74	131	9	8	17	.....	5	6	11
4	5	9	0	1	1	.....	12	6	18
1	2	3	2	2	4	.....	.....	.....	.....
98	132	230	15	19	34	.....	17	12	29
54	62	116	9	11	20	.....	29	24	53
7	3	10	5	0	5	.....	.....	.....	.....
9	.....	9	9	1	10	.....	9	1	10
96	12	108	.....	3	3	.....	3	0	3
7,723	7,620	15,343	558	527	1,085	.....	1,821	1,640	3,461
3,682	4,007	7,689	25	37	62	.....	219	134	353
2,136	1,722	3,858	16	18	34	.....	958	828	1,786
133	57	190	5	1	6	.....	2	3	5
193	35	228	14	1	15	.....	42	2	44
1,318	1,317	2,635	2	3	5	.....	53	164	217
261	482	743	496	467	963	71	547	509	1,056
5	3	8	.....	1	1	.....	.....	.....	151
232	378	610	457	447	904	71	505	491	996
84,680	137,970	222,650	166,805	163,155	329,960	25,915	184,004	179,478	363,482

TABLE No. 1—*Continued*

Showing the movements of the Hospital population for the year ended October 31st, 1921

	Woodstock Hospital			Gross Totals.
	Male	Female.	Total.	
Capacity of Hospital	96	106	202	
In Residence, Oct. 31st, 1920	101	101	202	7,689
Admitted during year 1921:—				
By Warrant				528
By Medical Certificate	21	14	35	1,725
Voluntary				15
Total number under treatment during year	122	115	237	9,495
Discharges during year:—				
As recovered				330
As improved	1	2	3	456
As unimproved	7	1	8	118
As not insane				7
Total number discharged during year	8	3	11	911
Died	18	6	24	630
Deported				26
Eloped				47
Transferred				373
Total number admitted since opening of Hospital	388	311	699	53,999
Total number discharged since opening of Hospital	156	107	263	22,395
Total number died since opening of Hospital	136	98	234	16,568
Total number deported since opening of Hospital				446
Total number eloped since opening of Hospital				939
Total number transferred sin ce opening of Hospital				5,755
Total remaining in Hospital, Oct. 31st, 1921	96	106	202	7,967*
Number of applications on fyle				232
Daily average population	97.74	103.70	201.44	7,654.20
Collective days' stay of all patients in residence during year	35,677	37,845	73,531	2,816,313

*This includes Guelph.

TABLE No. 2.

Showing social state of patients admitted during the year at all the Ontario Hospitals, and Religions of patients.

———	Admissions during 1921.
SOCIAL STATE—	
Single	1,113
Married	930
Widowed	204
Divorced	9
Separated	5
Unascertained	7
Totals	2,268
RELIGION—	
Baptists	97
Congregationalists	11
Anglicans	439
Methodists	421
Presbyterians	357
Roman Catholics	439
Other Denominations	284
Unascertained	220
Totals	2,268

TABLE No. 3.

Showing nativity of patients admitted during the year 1921.

Nativity.	Admissions of Year.
Total born in Canada	1,448
Armenia	
Assyria	1
Austria	21
Australia	
Belgium	2
Bulgaria	1
China	1
Denmark	12
England	326
France	3
Finland	9
Galicia	
Germany	14
Greece	5
Holland	2
Hungary	3
Ireland	78
Italy	21
Japan	
Macedonia	4
Other British Possessions	7
Norway	1
Roumania	2
Russia	51
Scotland	89
South America	
Spain	
Switzerland	
Sweden	1
Turkey	
United States	45
West Indies	4
Unascertained and other countries	117
Totals	2,268

TABLE No. 4.

Showing the occupation of those admitted to all Ontario Hospitals.

Occupation.	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetanguishene Hospital.	Toronto Hospital.	Whitby Hospital.	Guelph Hospital.	Total Insane Admitted.	Orillia Hospital.	Woodstock Hospital.	Total Insane, Feeble-minded and Epileptics.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	2	...	3	1	...	...	...	6	5	...	17	...	...	17
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	23	4	13	9	19	3	...	64	7	...	142	...	2	144
Agricultural and Pastoral:— Farmers, Gardeners, Stock Men, etc.	26	...	49	24	48	21	3	28	14	...	213	...	2	215
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	7	...	33	5	10	11	3	29	6	...	104	...	2	106
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	18	5	24	13	14	5	2	36	28	...	145	...	1	146
Domestic Service:— Waiters, Cooks, Servants, etc.	16	16	28	...	13	3	1	60	7	...	144	...	1	145
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	82	54	24	64	121	40	14	191	38	...	628	...	3	631
Miners, Marine Engineers, Railway Employees, Seamen, etc.	1	...	8	...	...	4	...	5	3	...	21	...	...	21
Labourers	31	...	47	12	32	20	8	114	53	...	317	...	8	325
No Occupation	3	2	86	9	12	8	1	102	2	...	225	168	16	409
Unascertained	...	12	1	...	11	...	1	...	5	71	101	...	...	101
Soldiers and Naval Service	...	...	...	8	...	...	...	...	...	...	8	...	...	8
Totals	209	93	316	145	280	115	33	635	168	71	2,065	168	35	2,268

TABLE No. 5.

Showing the Counties and Districts from which patients were received during the year.

Counties and Districts.	Patients in residence 31st October, 1921										Total Insane Admitted.	Orillia Hospital.	Woodstock Hospital.	Grand Total.
	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Whitby Hospital.	Guelph Hospital.				
Algoma District	....	....	....	1	2	8	4	12	5	....	32	....	....	32
Brant	....	5	12	....	19	....	....	5	....	....	41	....	....	41
Bruce	....	....	3	....	....	....	....	2	....	....	5	2	....	7
Carleton	88	....	....	....	....	....	....	....	....	....	88	2	3	93
Dufferin	....	4	9	....	....	....	....	5	....	....	18	1	1	20
Dundas	10	....	....	....	....	....	....	1	....	....	11	....	1	12
Durham	....	5	....	5	....	....	....	3	....	....	13	3	....	16
Elgin	....	....	1	....	25	....	....	....	....	....	26	7	....	33
Essex	....	....	1	....	49	....	....	....	....	....	50	1	1	52
Frontenac	....	....	2	44	....	....	....	....	1	....	47	6	1	54
Glengarry	13	....	....	....	....	....	....	....	....	....	13	....	....	13
Grenville	11	....	....	....	....	....	....	....	....	....	11	1	....	12
Grey	....	10	22	....	1	....	....	13	....	....	46	4	1	51
Haldimand	....	....	8	....	....	....	....	3	1	....	12	1	....	13
Halton	....	3	5	....	....	....	....	3	....	....	11	....	....	11
Hastings	....	2	....	35	....	....	1	1	3	....	42	8	2	52
Huron	....	....	....	....	21	....	....	....	1	....	22	1	....	23
Kent	....	....	....	....	15	....	....	....	....	....	15	4	....	19
Kenora	....	....	....	11	....	....	....	2	....	....	13	....	....	13
Lambton	....	....	....	....	21	....	....	1	....	....	22	....	....	22
Lanark	14	....	....	....	....	....	....	....	....	....	14	3	....	17
Leeds	30	....	....	1	....	....	....	....	....	....	31	2	1	34
Lennox and Addington	....	....	....	10	....	....	....	....	....	....	10	2	....	12
Lincoln	....	....	17	....	....	....	....	3	....	....	20	2	2	24
Manitoulin	....	....	....	....	....	1	....	....	....	....	1	....	....	1
Middlesex	....	....	1	....	78	....	....	....	1	....	80	9	3	92
Muskoka District	....	....	....	....	....	2	1	1	....	....	4	....	....	4
Nipissing District	....	....	....	....	....	8	1	12	2	....	23	....	....	23
Norfolk	....	2	8	....	1	....	....	3	....	....	14	1	....	15
Northumberland	....	11	2	9	....	....	....	....	1	....	23	2	....	25
Ontario	....	1	....	....	....	10	1	2	14	....	28	2	....	30
Oxford	....	....	....	....	23	....	....	1	....	....	24	4	....	28
Parry Sound District	....	....	....	....	....	7	5	7	....	....	19	1	1	21
Peel	....	....	2	....	....	6	....	2	....	....	10	....	....	10
Perth	....	....	....	....	18	....	....	2	....	....	20	3	....	23
Peterborough	....	13	....	4	....	3	....	3	....	....	23	3	....	26
Prescott	7	....	....	....	....	....	....	....	....	....	7	1	....	8
Prince Edward	....	....	....	6	....	....	....	....	....	....	6	....	....	6
Rainy River District	....	....	....	....	....	2	1	....	....	....	3	....	....	3
Renfrew	2	....	....	14	....	....	....	....	....	....	16	1	1	18
Russell	11	....	....	....	....	....	....	....	....	....	11	....	....	11
Simcoe	....	3	2	....	....	27	4	5	2	....	43	10	1	54
Sudbury	....	....	....	....	....	4	2	3	1	....	10	3	....	13
Stormont	21	....	....	....	....	11	....	....	....	....	32	....	....	32
Temiskaming	....	....	1	....	....	....	2	7	5	....	15	1	....	16
Thunder Bay District	....	....	....	....	....	9	3	2	....	....	14	1	....	15
Victoria & Haliburton	....	2	....	....	....	8	....	2	3	....	15	2	....	17
Waterloo	....	2	25	....	....	....	....	11	....	....	38	1	2	41
Welland	....	3	32	....	....	....	....	6	....	....	41	2	1	44
Wellington	....	10	24	....	1	....	....	5	2	....	42	1	....	43
Wentworth	....	13	136	....	....	1	....	25	2	....	177	8	1	186
York	....	4	2	2	....	7	4	482	124	....	625	62	12	699
Unascertained	....	....	....	3	1	....	4	....	....	71	79	....	....	79
Other Provinces	2	....	1	....	5	1	....	....	....	....	9	....	....	9
Totals	209	93	316	145	280	115	33	635	168	71	2,065	168	35	2,268

TABLE No. 6.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Men.	Women.	Total.	Inherited Predisposition.			Unascertained.
				Men.	Women.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.	51	51	102	11	11	22	50
Mental Strain, Worry and Overwork (not included in above)	86	123	209	27	41	68	73
Religious Excitement	4	13	17	2	6	8	3
Love Affairs, including seduction	3	15	18	0	5	5	8
Fright and Nervous Shock	11	10	21	2	3	5	7
PHYSICAL.							
Alcoholism	43	11	54	12	3	15	12
Sexual Excess	0	0	0	0	0	0	0
Venereal Diseases	48	9	57	5	2	7	11
Masturbation	3	0	3	2	0	2	1
Isolation	5	0	5	2	0	2	3
Accident or Injury	16	11	27	2	2	4	11
Pregnancy	0	12	12	0	5	5	6
Parturition and Puerperium	0	21	21	0	4	4	9
Lactation	0	2	2	0	2	2	0
Climacteric Period	0	28	28	0	5	5	9
Fevers	0	0	0	0	0	0	0
Privation and Overwork	0	10	10	0	6	6	3
Epilepsy	21	14	35	2	1	3	12
Other Convulsive Diseases	2	4	6	1	0	1	4
Diseases of Brain and Skull	186	274	460	3	0	3	2
Senility	77	123	200	16	21	37	33
Exophthalmic Goitre	0	0	0	0	0	0	0
Epidemic Influenza	9	5	14	5	2	7	1
Abuse of Drugs	34	17	51	7	4	11	28
Loss of Special Sense	0	0	0	0	0	0	0
Uræmia	0	0	0	0	0	0	0
Other Auto-Infection	0	9	9	0	3	3	3
Other Bodily Diseases	33	39	72	9	17	26	30
HEREDITARY.							
Congenital Defect	29	29	58	37	50	87	29
Unascertained	303	229	532	433	444	877	202
Not Insane	2	4	6	2	2	4	.....
Totals	966	1,063	2,029*	580	639	1,219	550

*This does not include Orillia.

TABLE No. 7.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted During Year.		
	Male.	Female.	Total.
Paternal Branch	51	83	134
Maternal Branch	65	78	143
Paternal and Maternal Branches	16	23	39
Collateral Branches	81	63	144
No hereditary tendency	292	333	625
Unascertained	565	547	1,112
Not Insane			
Totals	1,070	1,127	2,197*

*This does not include admissions at Guelph.

TABLE No. 8.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	326	477	803
Discharged, Recovered while on Probation	88	127	215
Discharged, Improved while on Probation	119	173	292
Discharged, Unimproved while on Probation	16	13	29
Died while on Probation	70	54	124
Returned to Hospital	83	122	205
Absent on Probation on October 31st, 1921	66	101	167
Totals	768	1,067	1,835

TABLE No. 9.

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Whitby Hospital.	Guelph Hospital.	Orillia Hospital.	Woodstock Hospital.	Total.
Specific Infectious Diseases:—													
Typhoid Fever	...	...	...	...	12	...	...	...	...	...	2	...	14
Influenza	...	...	...	...	...	...	...	...	...	...	...	0	0
Cerebro-spinal Meningitis	...	...	...	...	1	...	...	...	...	...	...	0	1
Diphtheria	...	...	...	...	...	...	...	...	...	...	2	0	2
Erysipelas	...	...	...	...	...	...	...	1	...	...	...	0	1
Septicæmia	...	1	1	...	1	...	...	1	...	...	1	0	5
Dysentery	...	...	2	...	1	...	...	...	...	...	6	0	9
Syphilis	...	...	1	...	1	...	...	...	...	...	...	0	2
Tuberculosis	6	5	9	6	3	6	3	8	3	...	18	0	67
Constitutional Diseases:—													
Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...
Arthritis Deformans	...	...	...	...	1	...	...	...	...	...	...	...	1
Diabetes Mellitus	...	...	1	...	...	...	...	...	...	...	...	...	1
Diseases of the Digestive System:—													
Mouth, salivary glands	...	...	...	...	...	...	...	...	...	...	...	...	...
Pharynx	...	...	...	...	...	...	...	...	...	...	...	...	...
Tonsils	...	...	...	...	...	...	...	...	...	...	...	...	...
Œsophagus	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis	...	...	2	...	...	...	...	...	...	...	...	...	2
Diseases of the Intestines:—													
Diseases of the Liver	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Pancreas	...	...	1	...	3	...	...	...	...	...	...	...	4
Diseases of the Peritoneum	...	...	2	...	3	2	...	...	...	...	...	...	7
Intestinal obstruction	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Respiratory System:—													
Diseases of the Nose and Larynx	...	1	...	...	...	...	...	...	...	...	...	...	1
Diseases of the Bronchi	3	...	2	2	4	11	...	1	...	...	...	...	23
Diseases of the Lungs	8	...	13	8	26	2	...	4	4	...	3	3	71
Diseases of the Pleura	...	...	1	...	...	...	...	9	...	...	...	...	10
Diseases of the Circulatory System:—													
Diseases of the Pericardium	2	...	...	...	...	...	...	...	...	...	...	...	2
Diseases of the Heart	1	3	12	1	11	8	3	6	3	...	2	1	51
Arterio-sclerosis	...	...	10	5	1	4	1	5	1	...	...	1	28
Aneurism	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Blood and Ductless Glands:—													
Anæmia	...	...	2	...	...	...	...	1	...	...	3	...	6
Pernicious Anæmia	...	1	...	1	1	...	...	1	1	...	...	...	5
Leucæmia	...	...	...	...	...	...	...	...	...	...	...	...	...
Exophthalmic Goitre	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Genito-Urinary System	...	...	9	1	...	...	3	1	1	...	...	...	15
Totals—*Carried forward*	20	11	68	24	69	33	10	38	13	...	37	5	328

TABLE No. 9—*Continued.*

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Whitby Hospital.	Guelph Hospital.	Orillia Hospital.	Woodstock Hospital.	Total.
Totals.—*Brought forward*	20	11	68	24	69	33	10	38	13	...	37	5	328
Diseases of the Nervous System:—													
Diseases of the Nerves	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Spinal Cord	...	...	...	...	...	...	...	...	...	...	3	...	3
Diseases of Meninges	...	...	...	...	1	...	...	...	...	...	1	...	2
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hemorrhage, and other gross lesions)	...	1	1	1	13	5	3	5	1	...	1	1	32
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	...	...	...	1	...	...	...	1	1	...	...	...	3
Epilepsy	7	1	1	2	1	1	...	1	...	...	8	17	39
Mental Diseases:—													
Exhaustion of Acute Mental Disease	8	2	14	2	3	2	...	19	2	...	...	...	52
Exhaustion of Chronic Mental Disease	1	2	19	2	15	...	...	...	...	...	1	...	40
General Paresis	8	...	7	7	7	2	...	14	2	...	...	...	47
Intoxications:—													
Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...
Morphinism	...	...	...	...	...	...	...	...	...	...	...	...	...
Metallic Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...
Heat Stroke	...	...	1	...	...	...	...	...	...	...	...	...	1
Debility of Old Age	8	6	...	...	12	...	...	31	...	...	1	...	58
Accident	1	...	...	...	...	...	...	...	...	...	...	...	1
Suicide	1	1	2	1	1	...	...	2	2	...	...	...	10
Surgical Diseases	...	...	...	...	...	...	...	...	...	...	1	...	1
Gynæcological Diseases	...	...	1	...	...	...	...	...	...	...	...	...	1
Malignant New Growths, or Cancer	...	1	2	1	...	...	...	2	1	...	...	1	8
Pellagra	2	...	...	...	...	...	...	...	...	...	...	...	2
Unknown (died on probation)	...	...	1	...	...	...	...	1	...	...	...	...	2
Totals	56	25	121	41	122	43	13	114	22	...	53	24	630

TABLE No. 10.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium		1	1		1	1		1	1
(b) Infection Delirium	4	11	15	5	14	19		2	2
(c) Post Infection Psychoses	1	6	7					2	2
Exhaustion Psychoses:—									
(a) Collapsed Delirium	4	8	12		2	2	2	4	6
(b) Acute Confusional Psychoses	6	19	25	2	13	15	2	4	6
(c) Neurasthenia	9	7	16	8	8	16			
(d) Psychasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications	11	1	12	6	0	6		2	2
(b) Chronic Intoxications				2	0	2	1	0	1
(a) Alcoholism (acute and chronic)	20	4	24	22	4	26	3	0	3
(b) Delirium Tremens		1	1	1	0	1			
(c) Korsakow's Psychoses	1	3	4						
(d) Acute Alcoholic Hallucinosis	1	0	1						
(e) Alcoholic Hallucinatory Dementia	5	1	6	1	0	1		1	1
(f) Alcoholic Paranoia	1	0	1	3	0	3			
(g) Alcoholic Paresis	0	0	0	0	0	0	0	0	0
(h) Morphinism	24	10	34	14	6	20			
(i) Cocainism	0	0	0	0	0	0	0	0	0
(j) Pellagra									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
(c) Hyperthyrogenous				1	0	1			
(d) Exophthalmic Goitre									
Dementia Præcox:—									
(a) Hebaphrenic	117	113	230	60	40	100	12	18	30
(b) Catatonic	129	206	335	80	89	169	31	49	80
(c) Paranoid	120	133	253	51	33	84	17	15	32
General Paresis	69	15	84	12	1	13	41	9	50
Organic Dementias:—Traumatic									
(a) Cerebral Sclerosis	2	1	3						
(b) Huntingdon's Chorea	2	1	3	1	0	1	0	3	3
(c) Multiple Sclerosis	2	0	2						
(d) Cerebral Syphilis							1	0	1
(e) Tabetic Psychoses	2	0	2	0	0	0	1	0	1
(f) Arterio-sclerotic Psychoses	26	11	37	4	4	8	14	8	22
(g) Cerebral Tumor, Abscess, Hæmorrhage	2	1	3	1	1	2	1	0	1
(h) Traumatic Dementia									
(i) Sunstroke									
Involution Psychoses:—									
(a) Melancholia	34	64	98	14	39	53	14	19	33
(b) Pre-senile Delusional Psychoses	21	25	46	6	4	10	2	8	10
(c) Senile Dementia	110	156	266	14	25	39	68	82	150
(d) Presbyphrenia									
Totals—*Carried forward*	723	798	1,521	308	284	592	210	227	437

TABLE No. 10.—*Continued.*

Showing form of mental diseases of patients admitted, discharged and died during the year ending October 31st, 1921.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought forward*	723	798	1,521	308	284	592	210	227	437
Manic Depressive Psychos:—									
(a) Manic States	54	68	122	42	74	116	19	12	31
(b) Depressed States	58	92	150	29	45	74	9	11	20
(c) Mixed States	2	4	6	2	5	7	1	1	2
(d) Paranoia	5	5	10	2	1	3	1	0	1
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	29	19	48	9	7	16	13	11	24
(b) Hysterical Psychoses	0	1	1	0	2	2	0	1	1
(c) Sexualis Psychopathia	1	0	1	....	....	....	....	....	....
(d) Post Apoleptic	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	127	97	224	40	30	70	30	21	51
(b) Idiocy	32	20	52	4	1	5	13	17	30
(c) Hypochondriac	....	....	....	....	....	....	....	....	....
Not Diagnosed	12	4	16	3	3	6	3	6	9
Not Insane	6	5	11	4	5	9	....	....	....
Woodstock	21	14	35	8	3	11	18	6	24
Guelph	71	....	71	....	....	....	....	....	....
Totals	1,141	1,127	2,268	451	460	911	317	313	630

TABLE No. 11.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on October 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
	168					
Under 1 month	185	182	24	21	17	80
From 1 to 2 months	105	142	18	19	8	40
" 2 " 3 "	126	189	32	16	5	30
" 3 " 4 "	123	130	30	20	5	28
" 4 " 5 "	54	115	32	32	4	25
" 5 " 6 "	118	82	26	43	1	12
" 6 " 9 "	190	400	68	115	14	49
" 9 " 12 "	97	265	29	54	11	31
" 12 " 18 "	124	815	37	47	23	49
" 18 months to 2 years	69	922	7	25	7	21
" 2 to 3 years	169	425	8	18	11	31
" 3 " 4 "	104	320	6	13	3	21
" 4 " 5 "	95	279	0	7	4	24
" 5 " 10 "	198	1,056	8	12	5	55
" 10 " 15 "	69	757	7	10	0	37
" 15 " 20 "	57	538	1	2	0	22
" 20 years and upwards	77	1,279	1	2	0	73
Unknown	61	.....	.....	.....	.....	.....
Not insane	8	.....	.....	3	.....	.....
Totals	2,197	7,896	330	456	118	630

TABLE

Showing the general average population and the result of

	Average daily population.			Number of patients admitted.			Number of patients recovered.			Number discharged improved, unimproved or deported.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Average 1882 to 1891	**2,898**	**2,862**	**5,760**	**578**	**540**	**1,118**	**170**	**172**	**342**	**74**	**86**	**160**
Average 1892 to 1901	**4,067**	**4,189**	**8,256**	**743**	**773**	**1,516**	**228**	**242**	**470**	**84**	**101**	**185**
Average 1902 to 1911	**4,969**	**5,403**	**10,372**	**998**	**1,054**	**2,052**	**280**	**309**	**589**	**181**	**177**	**358**
1912.....	2,748	2,934	5,682	653	594	1,247	141	155	296	171	148	319
1913.....	2,832	2,990	5,822	710	627	1,337	167	147	314	181	163	344
1914.....	2,877	3,042	5,919	684	667	1,351	203	163	366	220	198	418
1915.....	2,884	3,088	5,972	689	615	1,304	146	147	293	159	182	341
1916.....	2,936	2,993	5,929	738	676	1,414	184	165	349	158	168	326
1917.....	2,993	3,039	6,032	918	726	1,644	206	196	402	174	181	355
1918.....	3,058	3,076	6,734	740	720	1,460	175	174	349	198	162	360
1919.....	2,965	3,098	6,063	769	745	1,514	187	198	385	184	188	372
1920.....	2,918	3,335	6,253	1,199	1,680	2,879	185	190	375	228	259	487
1921.....	3,636	4,018	7,654	1,070	1,127	2,197*	147	183	330	312	288	600
Average 1912 to 1921	**41,781**	**44,067**	**85,848**	**817**	**818**	**1,635**	**174**	**172**	**346**	**198**	**194**	**392**

*This does not include Guelph.

No. 12.

treatment in the Hospitals of the Province from 1882 to 1921.

Number of patients who died.			Percentage of recoveries to average daily population.			Percentage of deaths to average daily population.			Number of patients remaining in Hospitals at end of each year.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
179	**146**	**325**	**11.81**	**12.42**	**11.94**	**12.50**	**10.16**	**11.31**	**2,929**	**3,047**	**5,976**
268	**213**	**481**	**11.20**	**11.54**	**11.37**	**12.77**	**10.11**	**11.65**	**4,085**	**4,219**	**8,304**
338	**320**	**658**	**11.29**	**11.48**	**11.40**	**13.36**	**11.76**	**12.56**	**4,998**	**5,452**	**10,450**
241	219	460	5.13	5.29	5.21	8.77	7.46	8.09	2,769	2,957	5,726
213	195	408	5.89	4.82	5.38	7.52	6.52	6.99	2,881	3,031	5,912
219	195	414	7.06	5.36	6.18	7.54	6.40	7.00	2,882	3,104	5,986
282	233	515	5.07	4.76	5.06	9.78	7.54	8.62	2,924	3,116	6,040
240	248	488	6.23	5.51	5.88	8.17	8.28	8.23	2,877	3,025	5,902
287	227	514	6.88	6.45	6.66	9.59	7.47	8.52	3,062	3,091	6,153
328	316	644	5.73	5.66	5.78	10.07	10.02	10.07	3,036	3,136	6,172
346	266	612	6.30	6.33	6.32	11.40	8.58	9.99	3,035	3,207	6,242
270	264	534	6.00	6.00	6.00	7.67	8.97	8.50	3,067	3,437	6,504
317	313	630	4.04	4.55	4.31	8.72	7.79	8.23	3,728	4,168	*7,896
274	**248**	**522**	**5.83**	**5.47**	**5.68**	**8.92**	**7.90**	**8.42**	42,273	4,499	87,263

TABLE No. 13.

Showing the number and percentage of recoveries to the average population, and to the number of admissions for the year ended October 31st, 1922.

Hospitals.	Average population			Admissions.		
	Average population.	Recovered.	Percentage.	Admissions.	Recovered.	Percentage.
Brockville	767	68	8.88	209	68	32.5
Cobourg	364	3	.82	93	3	3.23
Hamilton	1,111	51	4.59	316	51	16.14
Kingston	559	24	4.30	145	24	16.55
London	1,169	58	4.96	280	58	20.71
Mimico	614	27	4.40	115	27	23.48
Penetang	358	.....	.....	33	.....	.....
Toronto	610	87	14.26	635	87	13.70
Whitby	904	12	1.33	168	12	7.14
Guelph	.....	.....	.....	71	.....	.....
Orillia	996	.....	.....	168	.....	.....
Woodstock	201	.....	.....	35	.....	.....
Totals	7,653	330	4.31	2,268	330	15.02

TABLE No. 14.

Giving a summary of the discharges for the year ended October 31st, 1921.

	Male.	Female.	Total.
Discharged, Recovered	147	183	330
" Improved	207	249	456
" Unimproved	87	31	118
" Deported	18	8	26
" Eloped	44	3	47
" Not Insane	3	4	7
Total Number of Discharges	506	478	984

TABLE No. 15.

Showing the number of deaths in Hospitals for year ended October 31st, 1921.

Hospitals.	Number of deaths.	Daily average population.	Percentage of deaths on average population.
Brockville	56	767	7.30
Cobourg	22	364	6.04
Hamilton	121	1,111	10.89
Kingston	41	559	7.33
London	121	1,169	10.35
Mimico	43	614	7.00
Penetang	13	358	3.63
Toronto	116	610	19.02
Whitby	20	904	2.21
Guelph	.....	.....	.....
Orillia	53	996	5.32
Woodstock	24	201	11.94
	630	7,653	8.23

TABLE No. 16.

Ontario Hospitals.	Number of beds.			Number in residence October 31st, 1921.		
	Male.	Female.	Total.	Male.	Female.	Total.
Brockville	373	353	726	380	396	776
Cobourg	.....	450	450	.....	382	382
Hamilton	656	639	1,295	599	429	1,028
Kingston	311	268	579	298	274	572
London	590	596	1,186	584	615	1,199
Mimico	300	300	600	302	306	608
Penetang	166	203	369	165	202	367
Toronto	426	426	852	261	482	743
Whitby	550	460	1,010	496	467	963
Guelph	.....	.....	.....	.....	.....	71
Orillia	536	563	1,099	547	509	1,056
Woodstock	96	106	202	96	106	202
Totals	4,004	4,364	8,368	3,728	4,168	7,967

TABLE No. 17.

Showing the number of officers and employees in each Hospital.

Occupation.	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Whitby Hospital.	Orillia Hospital.	Woodstock Hospital.	Total.
Superintendents	1	1	1	1	1	1	1	1	1	1	1	11
Physicians	2	1	4	6	4	2	1	7	3	2	....	32
Bursars	1	1	1	1	1	1	1	2	1	1	....	11
Storekeepers and Assistants	2	....	3	1	2	1	....	1	2	1	....	13
Matron and Assistants	1	1	2	....	2	1	....	1	1	2	1	12
Office Staff (Clerks and Stenographers)	3	2	5	2	5	5	1	3	5	1	1	33
Engineers, Stokers and Assistants	5	2	4	7	5	3	5	7	9	8	2	57
Farmers and Gardeners	11	1	17	5	13	8	5	1	19	7	7	94
Dentists	....	....	1	....	1	1	....	1	....	1	....	5
Attendants, Male	52	2	71	42	63	37	12	41	45	30	11	406
Female Nurses	37	29	52	49	57	29	14	55	65	29	8	424
Domestic Help (Cooks, etc.)	13	8	23	13	34	15	9	17	22	24	7	185
Mechanics	9	2	11	5	12	5	5	7	10	7	1	74
Totals	137	50	195	132	200	109	54	144	183	114	39	1,357

TABLE No. 18.

Statement of Revenue from Paying Patients and Farm and Miscellaneous Revenue.

Hospitals.	No. of Paying Patients.	From Paying Patients.	Fro n Farm and Miscellaneous.	Total.
		$ c.	$ c.	$ c.
Brockville		36,200 56	11,179 21	47,379 77
Cobourg		8,921 64	9,528 37	18,450 01
Hamilton		75,788 10	5,038 42	80,826 52
Kingston		33,035 48	1,477 21	34,512 69
London		77,399 32	4,750 69	82,150 01
Mimico		35,280 11	602 06	35,882 17
Penetanguishene		1,959 79	1,061 46	3,021 25
Toronto		42,338 41	15,603 99	57,942 40
Whitby		34,731 23	10,650 78	45,382 01
Orillia		20,765 05	2,892 97	23,658 02
Woodstock		24,155 99	845 04	25,001 03
Totals		390,575 68	63,630 20	454,205 88
Revenue from Railway Taxation, under 6 Edward VII., Chap. 9, sub-sec. 2				127,028 10
Grand Total				581,233 98

TABLE No. 19.

Comparative Statement of Revenue.

The following statement shows the revenue received from the Hospitals for each year since 1871 together with the number of paying patients in the Hospitals from year to year.

	No. of Paying Patients.	Revenue.	Increase.	Decrease.
		$ c.	$ c.	$ c.
For the year ending September 30th, 1871	118	14,045 30		
" " 1872	139	19,255 80	5,219 50	
" " 1873	171	16,660 61		2,595 19
" " 1874	182	20,035 77	3,376 15	
" " 1875	231	21,875 92	1,840 15	
" " 1876	256	21,175 93		699 99
" " 1877	323	28,093 58	6,917 65	
" " 1878	334	30,103 75	2,010 17	
" " 1879	343	32,398 26	2,794 51	
" " 1880	387	37,653 81	4,755 55	
" " 1881	414	41,066 54	3,412 73	
" " 1882	475	43,937 64	2,871 10	
" " 1883	538	59,922 59	15,984 95	
" " 1884	496	48,135 18		11,787 41
" " 1885	509	49,620 93	1,485 73	
" " 1886	516	53,030 05	4,309 12	
" " 1887	514	48,742 53		4,287 52
" " 1888	538	59,638 16	10,895 08	
" " 1889	708	66,670 64	7,032 48	
" " 1890	562	62,754 16		3,916 48
" " 1891	577	48,507 52		14,246 14
" " 1892	632	73,240 61	14,733 19	
" " 1893	661	73,415 54	174 93	
" " 1894	697	72,722 04		693 50
" " 1895	743	68,290 31		4,431 73
" " 1896	904	97,898 19	29,607 88	
" " 1897	844	100,581 25	2,683 06	
" " 1898	770	72,042 44		28,538 81
" " 1899	778	74,364 54	2,322 10	
" " 1900	846	81,650 87	7,286 33	
" " 1901	902	90,677 46	9,026 59	
" " 1902	959	101,076 20	10,398 74	
" " 1903	1,029	97,416 03		3,660 17
" " 1904	1,111	106,167 49	8,751 46	
" " 1905	1,211	114,915 59	8,748 10	
For the 3 mos. ending December 31st, 1905		54,897 06	27,403 60	
For the year ending December 31st, 1906	1,732	165,404 08	50,488 49	
" " 1907	1,797	166,419 63	1,015 55	
" " 1908	1,878	146,148 77		3,739 24
For the 10 mos. ending October 31st, 1909	1,613	140,048 18		
For the year " " 1910	1,891	168,914 54		
" " " 1911	1,890	183,077 18	14,162 64	
" " " 1912	1,963	189,096 93	6,019 75	
" " " 1913	1,976	205,649 41	16,552 48	
" " " 1914	2,110	213,517 87	7,868 46	
" " " 1915	2,167	225,178 83	11,660 96	
" " " 1916	2,209	236,805 83	11,627 00	
" " " 1917	2,214	237,394 28	588 45	
" " " 1918	2,268	260,969 00	23,574 72	
" " " 1919	2,374	288,647 57	27,678 57	
" " " 1920	2,526	326,350 89	37,703 32	
" " " 1921		390,575 68	64,224 79	

TABLE No. 20

STATEMENT.

Showing the Expenditure on Maintenance under the different headings of the estimates for the year ending October 31st, 1921.

Headings of Estimates.	Brockville Hospital.	Cobourg Hospital.	Hamilton Hospital.	Kingston Hospital.	London Hospital.	Mimico Hospital.	Penetang Hospital.	Toronto Hospital.	Whitby Hospital.	Orillia Hospital.	Woodstock Hospital.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
School Section											
Medicines and medical comforts	2,875 48	1,193 19	5,728 47	3,231 60	4,783 80	3,399 53	970 11	3,370 58	4,742 58	2,781 63	1,223 16
Groceries, provisions and butchers' cattle	68,996 16	27,990 50	82,928 73	50,534 76	88,202 45	46,175 72	23,307 62	72,974 74	64,774 84	45,999 99	16,257 70
Fuel, light and water	57,692 81	25,758 74	79,486 92	52,904 52	67,313 76	37,267 39	18,467 61	54,748 73	74,960 54	75,826 91	15,224 40
Clothing	16,648 59	4,990 04	18,330 61	13,074 80	27,974 21	10,744 12	6,525 06	9,987 78	20,300 95	19,986 24	996 91
Laundry and cleaning	4,183 28	2,457 15	3,660 87	3,798 88	6,928 16	5,183 62	7,663 04	5,163 30	19,991 67	6,187 41	1,945 99
Furniture and furnishings	14,091 22	4,739 00	12,457 72	14,277 03	26,376 97	12,725 12	2,596 96	12,246 41	12,935 15	15,939 86	1,902 61
Office expenses	1,563 53	473 77	1,570 54	1,158 91	1,938 85	932 20	205 87	932 02	1,497 33	1,038 68	305 42
Farm expenses	12,241 98	900 03	16,495 97	4,527 44	11,333 75	2,959 58	5,180 74	1,006 71	14,353 90	7,986 98	2,718 42
Contingencies	2,044 52	1,426 52	3,324 29	2,449 71	3,295 80	1,565 42	609 74	1,366 55	3,218 00	2,298 12	274 09
Total expense	180,337 57	69,928 94	223,984 12	145,957 65	238,147 75	120,952 70	65,526 75	161,796 82	216,774 96	178,045 82	40,848 70
Salaries	123,304 19	41,974 87	164,814 28	100,128 52	177,787 93	92,058 31	49,448 27	87,142 38	136,178 21	103,254 92	39,667 40
Grand Totals	303,641 76	111,903 81	388,798 40	246,086 17	415,935 68	213,011 01	114,975 02	248,939 20	352,953 17	281,300 74	80,516 10

TABLE

Comparative Statement of Average Maintenance Cost per Capita

	Brockville		Hamilton		Kingston		London	
	1921	1920	1921	1920	1921	1920	1921	1920
Days' Residence of Patients	273,565	291,443	393,662	446,125	203,155	209,016	397,115	408,416
Average Number of Patients	749.49	796.29	1,078.52	1,218.92	556.59	571.08	1,087.99	1,115.89
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Medicines	**1.16**	**1.22**	**1.68**	**1.38**	**1.84**	**2.26**	**1.48**	**1.10**
Provisions	**21.11**	**24.61**	**19.58**	**21.60**	**23.00**	**26.32**	**20.80**	**23.35**
Breakfast Foods and Cereals	.55	.82	.56	.83	.38	.59	.37	.55
Butter	2.27	2.58	2.75	3.02	3.58	3.99	3.00	3.00
Coffee and Tea	.55	.72	.60	.63	.59	.67	.75	.97
Eggs	.71	.97	1.24	1.03	.86	.62	.62	.54
Flour, Bread, Etc	3.15	4.29	3.44	4.45	3.46	4.20	3.24	4.20
Fruit and Vegetables—Fresh	1.14	.92	.61	1.00	1.45	1.31	.85	1.41
" " Canned and Dried	1.04	1.29	2.03	1.24	1.09	1.43	.60	.60
Milk	1.89	2.26	1.63	1.55	2.30	2.70	2.74	1.86
Potatoes	.80	1.23	.74	1.50	.84	1.42	.78	1.41
Salt, Spices, Pickles, etc	.10	.12	.09	.10	.22	.18	.17	.09
Sugar and Syrup	1.50	2.10	1.06	1.42	1.58	1.76	1.93	2.17
Unenumerated Groceries	1.31	1.33	.87	.64	.78	.69	.78	1.03
Butchers' Meat	5.36	5.57	2.99	3.36	5.11	5.84	4.44	5.07
Fish and Fowl	.65	.41	.96	.83	.74	.92	.51	.45
Freight on Provisions	.09	.....	.01	.....	.02	.....	.02	.....
Fuel, Light and Water	**17.12**	**14.34**	**16.88**	**13.95**	**28.09**	**15.82**	**13.07**	**11.18**
Coal and Wood	14.37	12.56	14.88	12.24	27.00	15.42	11.82	10.21
Electricity	.18	.13	.51	.31	.88	.16	.70	.45
Gas	.71	.47	.37	.25	.....	.....	.17	.14
Oil, Candles, Matches, Etc	.11	.13	.07	.08	.12	.11	.06	.07
Water	1.75	1.05	1.05	1.07	.09	.13	.32	.31
Clothing	**5.29**	**6.79**	**5.18**	**3.86**	**5.49**	**6.73**	**6.39**	**6.33**
Clothing—Dry Goods	4.18	5.42	4.33	3.34	4.58	5.89	5.41	5.21
Boots, Shoes, Etc	1.11	1.37	.85	.52	.91	.84	.98	1.12
Laundry and Cleaning	**1.68**	**1.70**	**1.25**	**1.20**	**1.98**	**2.05**	**2.14**	**1.71**
Brushes, Brooms and Mops	.25	.26	.16	.18	.42	.43	.34	.25
Miscellaneous Expenses	.34	.30	.34	.38	.52	.33	.51	.31
Soap	1.08	1.14	.75	.64	1.04	1.29	1.29	1.15
Furniture and Furnishings	**5.45**	**3.23**	**3.29**	**3.81**	**6.55**	**6.72**	**6.13**	**6.10**
Office Expenses	**.63**	**.58**	**.44**	**.39**	**.62**	**.60**	**.57**	**.38**
Miscellaneous Items	.23	.18	.19	.14	.24	.26	.32	.17
Postage	.21	.22	.12	.13	.23	.19	.13	.12
Telephone and Telegraph	.19	.18	.13	.12	.15	.15	.12	.09
Salaries	**32.82**	**31.49**	**30.30**	**25.76**	**38.41**	**34.45**	**32.48**	**27.72**
Superintendent and Physicians	2.41	2.44	2.40	2.25	4.61	3.70	2.20	2.06
Bursar and Assistants	2.70	2.30	1.91	1.79	2.51	2.51	1.59	1.61
Matron and Assistants	4.05	4.42	4.23	3.55	3.39	2.98	4.54	3.87
Engineer and Assistants	3.20	3.07	3.08	2.88	3.30	3.37	4.00	2.99
Artisans, not Domestic	1.11	1.28	1.56	1.35	1.73	1.78	1.06	1.29
Farm and Garden	2.96	3.03	3.19	2.48	1.98	1.86	2.23	2.20
Teachers	.....	.....	.....	.....	.....	.....	.....	.....
Attendants and Nurses	16.35	14.93	13.89	11.41	20.89	18.18	16.86	13.70
Temporary Assistance	.05	.02	.04	.05	.....	.07	.....	.....

No. 21

per Day for the Twelve Months ending October 31st, 1921.

Mimico		Orillia		Penetang		Toronto		Woodstock		Whitby	
1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
218,290	224,693	362,548	353,972	127,176	131,609	220,547	257,163	73,754	72,633	329,885	148,964
598.05	613.92	993.28	967.14	348.43	359.56	604.24	702.63	202.07	198.45	903.79	809.58
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1.64	**1.51**	**1.04**	**.83**	**.77**	**.65**	**1.60**	**1.31**	**1.81**	**1.57**	**1.52**	**2.44**
22.88	**22.76**	**13.54**	**16.05**	**17.31**	**20.24**	**25.10**	**28.23**	**21.95**	**24.22**	**21.58**	**22.05**
.51	.88	.50	.71	.31	.47	.30	.45	.39	.58	.57	.79
4.27	4.12	1.82	2.34	2.18	2.75	3.90	4.46	2.93	3.43	2.13	1.80
.69	.55	.46	.68	1.02	1.08	.78	.92	.66	.86	.65	.78
1.38	1.34	.58	.57	.11	.06	.99	1.13	.06	.09	.62	.46
3.95	4.53	3.31	4.66	3.63	4.85	2.97	3.46	4.16	4.35	4.89	5.80
1.64	.88	.58	.53	.69	.86	.57	.66	1.25	1.19	.74	.51
.85	.78	.64	.82	1.26	1.02	1.06	1.14	1.74	1.71	1.24	.83
1.87	1.81	1.64	1.43	2.22	2.33	5.12	4.86	4.01	3.63	1.99	1.72
.34	.36	.16	.19	.38	.63	1.12	1.88	1.36	1.39	.66	.99
.09	.11	.07	.07	.05	.04	.16	.13	.10	.03	.38	.08
1.46	2.31	1.09	1.06	.78	.85	1.81	2.34	1.92	2.77	1.21	2.09
.27	.35	.82	.97	.99	.88	.90	1.04	.37	.73	.61	.61
4.74	3.55	1.38	1.56	3.17	3.79	4.51	4.91	1.69	2.29	4.48	4.90
.80	1.19	.46	.46	.48	.63	.81	.85	1.29	1.17	.84	.69
.02	.....	.03	.....	.04	.....	.10	.....	.02	.....	.57	.....
18.46	**12.53**	**13.22**	**9.85**	**11.20**	**10.73**	**19.87**	**18.92**	**14.74**	**12.72**	**20.46**	**21.79**
17.66	11.88	12.27	9.15	9.19	8.86	15.69	15.46	11.60	9.49	18.15	19.73
.63	.47	.86	.52	.63	.42	1.44	.64	.76	.75	1.14	.79
.....	.....	.....	.....	.....	.....	.71	.61	.....	.....	.....	.....
.17	.18	.05	.05	.04	.03	.09	.07	.....	.07	.08	.07
.....	.....	.04	.13	1.34	1.42	1.94	2.14	2.38	2.41	1.09	1.20
5.07	**6.23**	**5.25**	**6.71**	**6.48**	**6.54**	**5.26**	**4.49**	**1.31**	**1.30**	**6.14**	**6.14**
4.27	5.55	4.01	5.24	5.11	5.18	4.46	3.72	1.11	.97	5.26	5.28
.80	.68	1.24	1.47	1.37	1.36	.80	.77	.20	.33	.88	.86
2.77	**2.09**	**1.84**	**1.82**	**6.49**	**3.60**	**2.53**	**2.44**	**2.68**	**2.31**	**6.86**	**4.60**
.40	.35	.34	.36	.14	.15	.25	.19	.35	.27	.30	.33
.57	.47	.33	.26	5.92	2.99	.59	.44	.98	.95	5.45	3.29
1.80	1.27	1.17	1.20	.43	.46	1.69	1.81	1.35	1.09	1.11	.98
6.37	**5.62**	**5.21**	**3.64**	**2.28**	**2.50**	**5.34**	**5.73**	**2.92**	**4.32**	**4.43**	**7.08**
.56	**.46**	**.32**	**.29**	**.17**	**.16**	**.49**	**.38**	**.48**	**.46**	**.51**	**.50**
.19	.15	.10	.08	.05	.03	.14	.11	.09	.11	.24	.05
.18	.15	.14	.14	.05	.05	.11	.09	.18	.15	.13	.13
.19	.16	.08	.07	.07	.08	.24	.18	.21	.20	.14	.32
32.24	**27.74**	**20.34**	**18.82**	**26.39**	**27.04**	**32.72**	**26.94**	**32.90**	**34.83**	**32.52**	**32.18**
3.29	3.00	1.95	2.32	2.87	3.42	2.55	2.54	5.73	6.33	2.76	2.97
2.76	2.70	1.18	1.27	1.70	2.31	3.05	2.72	1.48	3.06	2.76	3.40
3.78	3.37	3.93	3.23	4.11	4.04	4.80	4.24	5.20	5.23	2.92	2.44
2.91	2.37	2.17	1.81	2.90	2.78	3.74	2.98	1.67	2.28	4.37	5.29
.97	1.17	.77	.70	2.00	2.83	1.57	1.58	1.20	1.41	1.13	1.13
2.82	1.85	1.98	1.62	3.01	2.80	.78	.57	6.15	6.43	4.33	4.44
.....	.....	.35	.66	.....	.....	.....	.....	.....	.....	.....	.....
15.62	13.24	8.00	7.21	9.55	8.81	16.17	12.30	11.45	10.05	14.23	12.48
.09	.04	.01		.25	.05	.06	.01	.02	.04	.02	.03

TABLE No.

Comparative Statement of Average Maintenance Cost per Capita

	Brockville		Hamilton		Kingston		London	
	1921	1920	1921	1920	1921	1920	1921	1920
Days' Residence of Patients	273,565	291,443	393,662	446,125	203,155	209,016	397,115	408,416
Average Number of Patients	749.49	796.29	1,078.52	1,218.92	556.59	571.08	1,087.99	1,115.89
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Allowances	**9.74**	**10.39**	**11.42**	**9.48**	**10.30**	**11.15**	**8.67**	**9.95**
Employees' Meals	9.02	9.68	10.60	8.92	9.37	10.21	7.31	8.92
" Uniforms	.51	.56	.79	.46	.88	.90	1.33	1.00
" Other Allowances	.21	.15	.03	.10	.05	.04	.03	.03
Farm and Garden	**7.95**	**8.65**	**8.85**	**6.12**	**3.81**	**3.78**	**5.09**	**6.05**
Feed and Fodder	5.15	6.65	6.38	4.84	2.31	2.34	3.78	4.82
Miscellaneous Farm Expenses	2.34	1.46	2.07	1.02	1.23	.89	.94	.67
Seeds, Etc	.46	.54	.40	.26	.27	.55	.37	.56
Contingencies	**1.00**	**.83**	**2.11**	**.88**	**1.30**	**1.18**	**1.46**	**.75**
Amusements, Religion, Education	.18	.22	.15	.07	.46	.30	.17	.12
Elopers, Cost of Recovery	.02	.....	.01	.....	.....	.....	.01	.....
Freight, Duties, Etc	.08	.13	.03	.07	.08	.22	.07	.08
Ice	.22	.05	1.22	.10	.....	.....	.64	.01
Incidental Expenses	.38	.37	.62	.54	.57	.53	.49	.41
Officers' Travelling Expenses	.12	.06	.08	.10	.19	.13	.08	.13
Per Capita Cost, Less Salaries	61.39	61.95	59.26	53.19	72.68	65.46	57.13	56.95
Per Capita Cost of Salaries	42.56	41.88	41.72	35.24	48.71	45.60	41.15	37.67
Total Gross Per Capita Cost	**103.95**	**103.83**	**100.98**	**88.43**	**121.39**	**111.06**	**98.28**	**94.62**
Less Total Recovery Per Capita	25.14	24.70	31.19	27.87	21.74	21.61	27.23	26.47
Net Per Capita Cost	**78.81**	**79.13**	**69.79**	**60.56**	**99.65**	**89.45**	**71.05**	**68.15**
Buildings, Engineers, Live Stock, Etc.	15.27	11.18	6.51	6.13	14.57	14.81	9.79	8.53
Total Per Capita Burden Payable by Province	**94.08**	**90.31**	**76.30**	**66.69**	**114.22**	**104.26**	**80.84**	**76.68**

N.B.—The accompanying is a Comparative Statement of the cost of maintenance per patient per day for the twelve months ending 31st October, 1921, in the ten Hospitals for the Insane, as compared with the twelve months ending 31st October, 1920, based on actual consumption and calculated to two places of decimals of a cent. The figures in black-faced type represent totals.

21—*Continued*

per Day for the Twelve Months ending October 31st, 1921.

Mimico		Orillia		Penetang		Toronto		Woodstock		Whitby	
1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
218,290	224,693	362,548	353,972	127,176	131,609	220,547	257,163	73,754	72,633	329,885	148,964
598.05	613.92	993.28	967.14	348.43	359.56	604.24	702.63	202.07	198,45	903.79	809.58
Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
8.09	**8.45**	**4.68**	**5.26**	**7.60**	**7.21**	**7.80**	**7.49**	**11.00**	**10.69**	**8.70**	**10.13**
6.98	6.51	4.09	4.86	6.86	6.73	6.70	6.62	9.72	9.93	7.89	9.33
.72	.63	.56	.30	.56	.37	1.10	.80	.37	.09	.76	.30
.39	1.31	.03	.10	.18	.11	.....	.07	.91	.67	.05	.50
4.87	**4.82**	**3.66**	**3.29**	**6.19**	**6.16**	**.66**	**.52**	**13.64**	**13.81**	**9.70**	**5.14**
4.53	3.48	2.57	2.29	4.42	4.72	.11	.19	9.06	10.40	7.08	2.28
.93	.89	.92	.76	1.61	.89	.49	.30	3.23	2.49	2.01	2.49
.41	.45	.17	.24	.16	.55	.06	.03	1.35	.92	.61	.37
.90	**.67**	**.65**	**.76**	**.86**	**.67**	**1.24**	**1.10**	**.42**	**.45**	**1.02**	**1.26**
.21	.09	.28	.27	.07	.08	.17	.12	.24	.18	.21	.28
.01	.....	.....	.....	.....	.....	.01	.....	.....	.....	.01	.....
.06	.12	.12	.23	.07	.18	.06	.08	.09	.12	.....	.01
.13	.04	.....	.....	.36	.....	.62	.43	.....	.01	.03	.....
.48	.42	.12	.20	.32	.34	.38	.46	.06	.05	.62	.81
.01	.....	.13	.06	.04	.07	.....	.01	.03	.09	.15	.16
63.52	56.69	44.73	43.24	51.39	51.25	62.09	63.12	59.95	61.16	72.22	71.00
40.33	36.19	25.02	24.08	33.99	34.25	40.52	34.43	43.90	45.52	41.22	42.31
103.85	**92.88**	**69.75**	**67.32**	**85.38**	**85.50**	**102.61**	**97.55**	**103.85**	**106.68**	**113.44**	**113.31**
24.52	24.03	11.05	13.69	8.78	12.61	26.42	22.13	46.49	61.00	28.26	24.82
79.33	**68.85**	**58.70**	**53.63**	**76.60**	**72.89**	**76.19**	**75.42**	**57.36**	**45.68**	**85.18**	**88.49**
6.22	8.36	2.70	4.51	3.53	7.51	1.87	2.00	13.84	17.52	7.38	20.05
85.55	**77.21**	**61.40**	**58.14**	**80.13**	**80.40**	**78.06**	**77.42**	**71.20**	**63.20**	**92.56**	**108.54**

Under the headings "Provisions" and "Clothing" is shown the actual consumption by patients—the value of such supplies to officers, attendants, nurses and employees being included under the heading "Allowances."

Where no charge is shown for light or water, these are included in the cost of coal.

TABLE

Comparisons, Appropriations, Expenditures, Consumption, Population

		Brockville.	Hamilton.	Kingston.
Days' residence of patients		273,565	393,626	203,155
Average number of patients		749.49	1,078 52	556.59
Medicines	Appropriation	$3,600 00	$6,700 00	$5,000 00
	Expenditure	**2,875 48**	**5,728 47**	**3,231 60**
	Consumption	3,165 82	6,594 83	3,731 00
Provisions	Appropriation	90,000 00	125,000 00	75,000 00
	Expenditure	**68,996 16**	**82,928 73**	**50,534 76**
	Consumption	57,741 18	77,107 92	46,712 71
Fuel, light and water	Appropriation	60,000 00	95,000 00	53,000 00
	Expenditure	**57,692 81**	**79,486 92**	**52,904 52**
	Consumption	46,847 72	66,450 85	57,068 24
Clothing, etc	Appropriation	20,000 00	22,000 00	15,000 00
	Expenditure	**16,648 59**	**18,330 61**	**13,074 80**
	Consumption	14,470 00	20,381 59	11,156 36
Laundry, etc	Appropriation	5,000 00	6,000 00	5,000 00
	Expenditure	**4,183 28**	**3,660 87**	**3,798 88**
	Consumption	4,585 89	4,944 75	4,029 38
Furniture and furnishings	Appropriation	23,000 00	24,000 00	15,000 00
	Expenditure	**14,091 22**	**12,457 72**	**14,277 03**
	Consumption	14,896 74	12,968 58	13,291 94
Office	Appropriation	1,800 00	2,500 00	1,500 00
	Expenditure	**1,563 53**	**1,570 54**	**1,158 91**
	Consumption	1,713 54	1,711 32	1,266 81
Salaries	Appropriation	134,696 39	176,905 00	106,978 16
	Expenditure	**123,304 19**	**164,814 28**	**100,128 52**
	Consumption	116,442 97	164,273 62	98,957 87
Farm, etc	Appropriation	15,000 00	16,500 00	7,000 00
	Expenditure	**12,241 98**	**16,495 97**	**4,527 44**
	Consumption	21,737 48	34,849 32	7,731 83
Contingencies	Appropriation	2,500 00	4,000 00	2,450 00
	Expenditure	**2,044 52**	**3,324 29**	**2,449 71**
	Consumption	2,729 47	8,296 93	2,648 30
Total maintenance	Appropriation	355,596 39	478,605 00	285,928 16
	Expenditure	**303,641 76**	**388,798 40**	**246,086 17**
	Consumption	284,330 81	397,579 71	246,594 44
Buildings, engineers, live stock, etc	Appropriation	45,350 00	41,600 00	39,000 00
	Expenditure	**41,782 16**	**25,658 87**	**29,613 23**
Grand Total	Appropriation	400,946 39	520,205 00	324,928 16
	Expenditure	**345,423 92**	**414,457 27**	**275,699 40**

REVENUE COLLECTIONS

From paying patients this year to date	**$36,200 56**	**$75,788 10**	**$33,035 48**
" " " last " "	41,011 02	77,202 02	38,953 59
Patients' revenue per capita this year ..... cents	**13 23**	**19 25**	**16 26**
" " " last " ..... cents	14 07	17 30	15 64
From farm and miscellaneous sales this year	**$11,179 21**	**$5,038 42**	**$1,477 21**
" " " last "	8,485 35	8,003 88	1,511 23
Farm and misc. revenue per capita this year .... cents	**4 05**	**1 28**	**72**
" " " last " .... cents	2 91	1 80	60
Revenue from perquisites this year	**$29,889 46**	**$41,105 27**	**$19,472 04**
" " " last "	12,449 59	18,317 92	9,486 56
Revenue from perquisites per capita this year ... cents	**10 93**	**10 44**	**9 59**
" " " last " ... cents	4 27	4 10	3 81
Total revenue this year	**$77,269 23**	**$121,931 79**	**$53,984 73**
" " last "	61,945 96	103,523 82	49,951 38
Total revenue per capita per day this year ..... cents	**28 21**	**30 97**	**26 57**
" " " last " ..... cents	21 25	23 20	20 05
Farm production consumption this year ..... cents	**7 86**	**10 66**	**4 76**
" " " last " ..... cents	7 72	8 77	5 37
Total recovery per capita this year, not including revenue from perquisites ..... cents	**25 14**	**31 19**	**21 74**
Total recovery per capita last year ..... cents	24 70	27 87	21 61

No. 22.—Continued.

and Revenue for the twelve months ending October 31st, 1921.

London.	Mimico.	Orillia.	Penetang.	Toronto.	Woodstock.	Whitby.
397,115	218,290	362,548	127,176	220,547	73,754	329,885
1,087.99	598.05	993.28	348.43	604.24	202.07	903.79
$4,800 00	$3,500 00	$3,000 00	$1,000 00	$3,500 00	$1,500 00	$5,500 00
4,783 80	**3,399 53**	**2,781 63**	**970 11**	**3,370 58**	**1,223 16**	**4,742 58**
5,863 03	3,571 90	3,759 07	971 11	3,515 31	1,339 10	4,980 19
120,000 00	60,000 00	75,000 00	35,000 00	90,000 00	22,000 00	90,000 00
88,202 45	**46,175 72**	**45,999 99**	**23,307 62**	**72,974 74**	**16,257 70**	**64,774 84**
82,601 92	49,959 74	49,103 37	22,005 12	55,348 20	16,189 30	71,183 89
80,000 00	40,000 00	80,000 00	23,600 00	55,000 00	18,000 00	75,000 00
67,313 76	**37,267 39**	**75,826 91**	**18,467 61**	**54,748 73**	**15,224 40**	**74,960 54**
51,903 20	40,302 67	47,940 71	14,234 62	43,828 07	10,874 36	67,489 16
28,000 00	17,000 00	20,000 00	10,000 00	10,000 00	2,000 00	20,350 00
27,974 21	**10,744 12**	**19,986 24**	**6,525 06**	**9,987 78**	**996 91**	**20,300 95**
25,385 11	11,060 35	19,033 08	8,232 74	11,604 15	961 14	20,241 74
10,000 00	6,000 00	8,000 00	10,000 00	6,000 00	2,200 00	20,000 00
6,928 16	**5,183 62**	**6,187 41**	**7,663 04**	**5,163 30**	**1,945 99**	**19,991 67**
8,508 20	6,052 62	6,686 45	8,252 38	5,581 20	1,973 62	22,613 79
32,000 00	16,000 00	18,500 00	4,500 00	15,000 00	3,500 00	20,000 00
26,376 97	**12,725 12**	**15,939 86**	**2,596 96**	**12,246 41**	**1,902 61**	**12,935 15**
24,317 44	13,901 82	18,878 12	2,903 04	11,771 40	2,151 49	14,577 45
2,500 00	1,200 00	1,500 00	600 00	1,500 00	500 00	2,000 00
1,938 85	**932 20**	**1,038 68**	**205 87**	**932 02**	**305 42**	**1,497 33**
2,256 10	1,228 71	1,149 23	227 80	1,095 84	351 27	1,690 36
187,587 00	95,975 00	105,869 24	53,790 00	93,345 84	42,049 60	149,891 47
177,787 93	**92,058 31**	**103,254 92**	**49,448 27**	**87,142 38**	**39,667 40**	**136,178 21**
163,438 59	88,040 16	90,708 75	43,222 78	89,374 14	32,380 29	136,010 36
20,000 00	5,000 00	8,000 00	5,500 00	1,500 00	5,000 00	15,000 00
11,333 75	**2,959 58**	**7,986 98**	**5,180 74**	**1,006 71**	**2,718 42**	**14,353 90**
20,218 43	10,632 46	13,273 00	7,863 63	1,455 25	10,059 57	31,983 23
4,000 00	2,200 00	2,900 00	1,150 00	3,500 00	1,000 00	3,500 00
3,295 80	**1,565 42**	**2,298 12**	**609 74**	**1,366 55**	**274 09**	**3,218 00**
5,817 47	1,951 32	2,375 45	1,103 62	2,746 70	312 99	3,385 76
488,887 00	246,875 00	322,769 24	145,140 00	279,345 84	97,749 60	401,241 47
415,935 68	**213,011 01**	**281,300 74**	**114,975 02**	**248,939 20**	**80,516 10**	**352,953 17**
390,309 49	226,701 75	252,907 23	108,553 66	226,320 26	76,593 13	374,155 93
44,500 00	32,000 00	22,500 00	20,300 00	4,300 00	17,600 00	39,000 00
38,906 09	**13,604 89**	**9,779 28**	**4,511 21**	**4,131 67**	**10,210 00**	**24,333 75**
533,387 00	278,875 00	345,269 24	165,440 00	283,645 84	115,349 60	440,241 47
454,841 77	**226,615 90**	**291,080 02**	**119,486 23**	**253,070 87**	**90,726 10**	**377,286 92**
$77,399 32	**$35,280 11**	**$20,765 05**	**$1,959 79**	**$42,338 41**	**$24,155 99**	**$34,731 23**
65,681 67	32,851 15	21,018 13	4,154 31	47,572 69	24,263 85	18,336 29
19 49	**16 16**	**5 73**	**1 53**	**19 20**	**32 75**	**10 53**
14 08	14 62	5 94	3 15	18 50	33 41	12 31
$4,750 69	**$602 06**	**$2,892 97**	**$1,061 46**	**$15,603 99**	**$845 04**	**$10,650 78**
21,032 07	1,569 00	8,669 12	2,620 91	9,102 37	6,247 67	21,623 93
1 19	**27**	**80**	**83**	**7 07**	**1 14**	**3 23**
5 15	70	2 45	2 26	3 55	8 61	6 99
$44,072 62	**$19,281 12**	**$26,156 03**	**$14,099 75**	**$12,570 50**	**$13,995 20**	**$25,154 40**
21,541 01	13,818 82	15,678 56	9,430 02	8,759 22	7,865 50	11,202 70
11 10	**8 83**	**7 21**	**11 08**	**5 70**	**18 97**	**7 63**
5 27	6 15	4 43	6 90	3 40	10 82	7 52
$126,202 63	**$55,163 29**	**$49,814 05**	**$17,121 00**	**$70,512 90**	**$38,996 23**	**$70,536 41**
108,254 75	48,238 97	45,365 81	16,205 24	65,434 28	38,377 02	51,162 92
31 78	**25 26**	**13 74**	**13 44**	**31 97**	**52 86**	**21 39**
24 50	21 47	12 82	12 31	25 45	52 84	26 82
6 55	**8 09**	**4 52**	**6 42**	**15**	**12 60**	**14 50**
7 24	8 71	5 30	7 20	08	18 98	5 52
27 23	**24 52**	**11 05**	**8 78**	**26 42**	**46 49**	**28 26**
26 47	24 03	13 69	12 61	22 13	61 00	24 82

APPENDIX

TO FIFTY-FOURTH ANNUAL REPORT UPON THE ONTARIO HOSPITALS FOR THE INSANE AND CONTAINING THE ANNUAL REPORTS OF THE SUPERINTENDENTS OF THE HOSPITALS IN BROCKVILLE, COBOURG, HAMILTON, KINGSTON, LONDON, MIMICO, PENETANGUISHENE, TORONTO, WHITBY, ORILLIA, WOODSTOCK, AND HOMEWOOD SANATORIUM, GUELPH.

THE ONTARIO HOSPITAL, BROCKVILLE.

Brockville, November 11th, 1921.

SIR:—

Enclosed please find our Annual Statistical Report for the year ending October 31st, 1921.

I have the honour to remain,

Your obedient servant,

W. K. Ross,
Superintendent.

The Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR THE INSANE, BROCKVILLE, FOR THE YEAR ENDING OCTOBER 31ST, 1921.

TABLE No. 1.—BROCKVILLE.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	373	353	726			
In residence October 31st, 1920				379	380	759
Admitted during year 1921:						
By Warrant	1	1	2			
By Medical Certificate	98	109	207	99	110	209
Total number under treatment during year 1921				478	490	968
Discharges during year:—						
As recovered	30	38	68			
As improved	26	23	49			
As unimproved	11	4	15			
As not insane	0	0	0			
Total number discharged during year.	67	65	132			
Died	28	28	56			
Deported	3	1	4			
Eloped	0	0	0			
Transferred	0	0	0	98	94	192
Remaining in Hospital, October 31st, 1921	31	29	60	380	396	776
Total number admitted since opening of Hospital				2,167	2,130	4,297
Total number discharged since opening of Hospital	903	938	1,841			
Total number died since opening of Hospital	736	629	1,365			
Total number deported since opening of Hospital	18	12	30			
Total number eloped since opening of Hospital	101	2	103			
Total number transferred since opening of Hospital	29	153	182	1,787	1,734	3,521
Total remaining in Hospital October 31st, 1921	1,787	1,734	3,521	380	396	776
Daily average population	378.9	388.4	767.3			
Collective days' stay of all patients in residence during year	138,320	141,798	280,118			
Number of applications on fyle	6	11	17			

TABLE No. 2.—BROCKVILLE.

Showing social state and religion of patients admitted during the year ending October 31st, 1921.

	In residence.			Admissions of year.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	142	122	264	53	43	96
Married	223	220	443	40	45	85
Widowed	12	53	65	4	20	24
Divorced	2	0	2	2	0	2
Separated	1	1	2	.....	2	2
Unascertained	0	0	0	0	0	0
Totals	380	396	776	99	110	209
RELIGION.						
Baptists	16	25	41	2	3	5
Congregationalists	0	7	7	1	1	2
Episcopalians	56	76	132	22	27	49
Methodists	51	51	102	16	19	35
Presbyterians	47	52	99	13	20	33
Roman Catholics	176	149	325	41	33	74
Other Denominations	28	27	55	4	6	10
Unascertained	6	9	15	.....	1	1
Totals	380	396	776	99	110	209

TABLE No. 3.—BROCKVILLE.

Showing nativity of patients admitted during the year ending October 31st, 1921.

NATIVITY.	Admissions of Year.		
	Male.	Female.	Total.
Total admissions	99	110	209
Total born in Canada	83	96	179
Armenia			
Assyria			
Austria	2	1	3
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	6	5	11
France			
Finland			
Galicia			
Germany		1	1
Greece	1		1
Holland			
Hungary			
Ireland			
Italy			
Japan			
Macedonia			
Other British Possessions			
Norway			
Roumania	1		1
Russia	1	2	3
Scotland	1	3	4
South America			
Spain			
Sweden			
Turkey			
United States	3	2	5
West Indies			
Unascertained	1		1
Total	16	14	30

TABLE No. 4.—BROCKVILLE.

Showing the occupation of those admitted during the year ending October 31st, 1921.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	2	.....	2
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	18	5	23
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	26	.....	26
Mechanics at Outdoor Vocations: Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	7	.....	7
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	10	8	18
Domestic Service:— Waiters, Cooks, Servants, etc.	.....	16	16
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	3	79	82
Miners, Marine Engineers, Railway Employees, Seamen, etc.	1	.....	1
Laborers	31	.....	31
No occupation	1	2	3
Unascertained	.....	.....	.....
Soldiers and Naval Service	.....	.....	.....
Totals	99	110	209

TABLE No. 5.—BROCKVILLE.

Showing the Counties and Districts from which patients have been admitted during the year ending October 31st, 1921.

Counties and Districts.	Admitted during Year.			Warrant cases.			Remaining in residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District									
Brant									
Bruce									
Carleton	38	50	88				121	136	257
Dufferin									
Dundas	4	6	10				11	9	20
Durham								3	3
Elgin									
Essex							1	2	3
Frontenac							4	5	9
Glengarry	7	6	13				14	17	31
Grenville	4	7	11				25	15	40
Grey									
Haldimand							1		1
Haliburton									
Halton							1		1
Hastings							2	4	6
Huron							2		2
Kenora									
Kent							1		1
Lambton							3		3
Lanark	5	9	14		1	1	34	40	74
Leeds	16	14	30	1		1	37	55	92
Lennox and Addington								2	2
Lincoln									
Manitoulin									
Middlesex								2	2
Muskoka District									
Nipissing District							1		1
Norfolk									
Northumberland							3		3
Ontario									
Oxford							1		1
Parry Sound District									
Peel							1		1
Perth							2	1	3
Peterborough							1		1
Prescott	4	3	7				28	31	59
Prince Edward									
Rainy River District									
Renfrew	1	1	2				5	3	8
Russell	7	4	11				22	25	47
Simcoe							3		3
Stormont	11	10	21				38	34	72
Sudbury									
Temiskaming								1	1
Thunder Bay District							2	2	4
Victoria									
Waterloo									
Welland							1		1
Wellington									
Wentworth							2	1	3
York							13	8	21
Unascertained									
Other Provinces	2		2						
Totals	99	110	209	1	1	2	380	396	776

TABLE No. 6.—BROCKVILLE.

Showing the assigned causes of Insanity in the cases admitted during the year ending October 31st, 1921.

Causes.				Inherited Predisposition.			Unascertained
	Men.	Women.	Total.	Men.	Women.	Total.	
Moral.							
Adverse conditions (such as loss of friends, business troubles, etc.)	7	14	21	2	1	3	18
Mental Strain, Worry and Overwork (not included in above)	17	19	36	6	12	18	18
Religious Excitement	1	2	3	1	2	3	.....
Love Affairs, including seduction	.....	2	2	.....	.....	.....	2
Fright and Nervous Shock	2	1	3	1	1	2	1
Physical.							
Alcoholism	1	1	2	1	.....	1	1
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	7	1	8	.....	.....	.....	8
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	2	.....	2	1	.....	1	1
Pregnancy	.....	.....	.....	.....	.....	.....	.....
Parturition and Puerperium	.....	1	1	.....	.....	.....	1
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	3	3	.....	1	1	2
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	6	1	7	1	.....	1	6
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	6	11	17	1	1	2	15
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	4	1	5	1	.....	1	4
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	2	3	5	1	1	2	3
Hereditary.							
Congenital Defect	5	6	11	1	.....	1	10
Unascertained	39	44	83	17	20	37	46
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	99	110	209	34	39	73	136

TABLE No. 7.—BROCKVILLE.

Showing hereditary tendency to Insanity in patients admitted during the year ending October 31st, 1921.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	12	13	25
Maternal Branch	16	11	27
Paternal and Maternal Branches	2	7	9
Collateral Branches	5	8	13
No Hereditary Tendency	47	50	97
Unascertained	17	21	38
Totals	99	110	209

TABLE No. 8.—BROCKVILLE.

Showing summary of Probational discharges during the year ending October 31st, 1921.

	Male.	Female.	Total.
Number Granted Probational Discharge	18	30	48
Discharged, Recovered while on Probation	13	20	33
Discharged, Improved	5	9	14
Discharged, Unimproved	.....	1	1
Died	.....	.....	.....
Returned to Hospital	4	10	14
Absent on Probation, October 31st, 1921	4	7	11
Eloped, October 31st, 1921	1	.....	1

TABLE No. 9.—BROCKVILLE.

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis	4	2	6
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi	1	2	3
" " Lungs	4	4	8
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium	1	1	2
" " Heart	1	0	1
Arterio-sclerosis			
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System:—			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried Forward*	11	9	20

TABLE No. 9.—BROCKVILLE.—*Continued.*

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	11	9	20
Diseases of the Nervous System—*Continued*			
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)			
Functional Nervous Diseases, (Paralysis, Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy	3	4	7
Mental Diseases:—			
Exhaustion of Acute Mental Disease	0	8	8
Exhaustion of Chronic Mental Disease	1	0	1
General Paresis	7	1	8
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age	5	3	8
Accident	1	0	1
Suicide	0	1	1
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths or Cancer			
Pellagra		2	2
Unascertained			
Totals	28	28	56

TABLE No. 10.—BROCKVILLE.

Showing form of mental disease of patients admitted, discharged and died during the year ending October 31st, 1921.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium	0	1	1						
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses	0	6	6	0	3	3			
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications							0	2	2
(b) Chronic									
(a) Alcoholism (acute and chronic)	1	1	2	2	1	3	1	0	1
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism	3	1	4	4	1	5			
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	17	10	27	9	1	10	3	2	5
(b) Catatonic	14	18	32	14	14	28	1	5	6
(c) Paranoid	10	13	23	15	5	20	2	1	3
General Paresis	8	2	10	3	0	3	7	1	8
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea	1	0	1						
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses	0	2	2	0	1	1	0	1	1
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia	7	13	20	2	4	6	2	3	5
(b) Pre-senile Delusional Psychoses	1	1	2	0	1	1			
(c) Senile Dementia	11	19	30	1	6	7	7	8	15
Manic Depressive Psychoses:—									
(a) Manic States	5	5	10	6	12	18	1	1	2
(b) Depressed States	7	9	16	6	13	19			
(c) Mixed States	2	1	3	0	1	1			
Paranoia									
Totals—*Carried Forward*	87	102	189	62	63	125	24	24	48

TABLE No. 10.—BROCKVILLE.—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year ending October 31st, 1921.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	87	102	189	62	63	125	24	24	48
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	7	1	8	2	0	2	4	4	8
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	5	7	12	3	2	5	....	....	....
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	....	....	....	....	....	....	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	99	110	209	67	65	132	28	28	56

TABLE No. 11.—BROCKVILLE.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	40	14	1	2	0	8
From 1 to 2 months	20	12	6	5	2	5
" 2 " 3 "	18	16	8	5	2	6
" 3 " 4 "	23	15	5	2	0	4
" 4 " 5 "	9	8	9	3	2	2
" 5 " 6 "	7	8	2	4	0	1
" 6 " 9 "	15	33	11	9	5	4
" 9 " 12 "	2	33	4	5	1	0
" 12 " 18 "	13	34	13	4	2	9
" 18 months to 2 years	3	28	0	0	0	0
" 2 to 3 years	17	58	2	3	1	2
" 3 " 4 "	10	39	3	3	0	0
" 4 " 5 "	6	32	0	0	0	4
" 5 " 10 "	8	143	1	2	0	2
" 10 " 15 "	3	99	3	2	0	2
" 15 " 20 "	2	85	0	0	0	1
" 20 years and upwards	13	119	0	0	0	6
Totals	*209	776	68	49	15	56

*NOTE—This total must agree with the total admissions of the year

THE ONTARIO HOSPITAL, COBOURG.

December 15th, 1921.

W. W. DUNLOP, ESQ.,
Inspector of Hospitals,
Toronto, Ont.

SIR:—

I have the honour to present the Annual Report of the Ontario Hospital at Cobourg for the year ended October 31st, 1921.

Following are the several Tables showing the movements of the population of this Hospital during the year.

I have the honour to be, Sir,

Your obedient servant,

H. MCNAUGHTON,
Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR INSANE, COBOURG, FOR THE YEAR ENDING OCTOBER 31ST, 1921.

TABLE No. 1.—COBOURG.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	.....	450	450			
In residence, October 31st, 1920	.....	.....	.....	.....	327	327
Admitted during year 1921:—						
By Warrant	.....	26	26			
By Medical Certificate	.....	67	67	.....	93	93
Total number under treatment during year	.....	.....	.....	.....	420	420
Discharges during year:—						
As recovered	.....	3	3			
As improved	.....	8	8			
As unimproved	.....	.....	.....			
As not insane	.....	.....	.....			
Total number discharged during year	.....	11	11			
Died	.....	22	22			
Deported	.....	2	2			
Eloped	.....	.....	.....			
Transferred	.....	.....	.....	.....	38	38
Remaining in Hospital October 31st, 1921	.....	.....	.....	.....	382	382
Total number admitted since opening of Hospital	.....	.....	.....	.....	421	421
Total number discharged since opening of Hospital	.....	11	11			
Total number died since opening of Hospital	.....	22	22			
Total number deported since opening of Hospital	.....	2	2			
Total number eloped since opening of Hospital	.....	.....	.....			
Total number transferred since opening of Hospital	.....	.....	.....	.....	38	38
Total remaining in Hospital October 31st, 1921	.....	.....	.....	.....	382	382
Daily average population	.....	364.41	364.41			
Collective days' stay of all patients in residence during year	.....	132,973	132,973			
Number of applications on fyle	.....	3	3			

TABLE No. 2.—COBOURG.

Showing social state and religion of patients admitted during the year ending October 31st, 1921.

	Admissions of Year.		
	Male.	Female.	Total.
SOCIAL STATE.			
Single		49	49
Married		34	34
Widowed		10	10
Divorced		0	0
Separated		0	0
Unascertained		0	0
Totals		93	93
RELIGION.			
Baptists		6	6
Congregationalists		2	2
Episcopalians		18	18
Methodists		30	30
Presbyterians		15	15
Roman Catholics		10	10
Other Denominations		12	12
Unascertained		0	0
Totals		93	93

TABLE No. 3.—COBOURG.

Showing nativity of patients admitted during the year ending October 31st, 1921.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total admissions		93	93
Total born in Canada		71	71
Armenia			
Assyria			
Austria			
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England		14	14
France			
Finland			
Galicia			
Germany			
Greece			
Holland			
Hungary			
Ireland		3	3
Italy			
Japan			
Macedonia			
Other British Possessions			
Norway			
Roumania			
Russia		1	1
Scotland		3	3
South America			
Spain			
Sweden			
Turkey			
United States			
West Indies			
Unascertained		1	1
Totals		93	93

TABLE No. 4.—COBOURG.

Showing the occupation of those admitted during the year ending October 31st, 1921.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.			
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.		4	4
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.			
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.			
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.		5	5
Domestic Service:— Waiters, Cooks, Servants, etc.		16	16
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.		54	54
Miners, Marine Engineers, Railway Employees, Seamen, etc.			
Labourers			
No Occupation		2	2
Unascertained		12	12
Totals		93	93

TABLE No. 5.—COBOURG.

Showing the counties and districts from which patients have been admitted during the year ending October 31st, 1921.

Counties and Districts.	Admitted during Year.			Warrant Cases Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District									
Brant		5	5		2	2		11	11
Bruce								4	4
Carleton								24	24
Dufferin		4	4		1	1		8	8
Dundas								2	2
Durham		5	5		1	1		6	6
Elgin								5	5
Essex								8	8
Frontenac								3	3
Glengarry								4	4
Grenville								4	4
Grey		10	10		5	5		18	18
Haldimand								3	3
Halton		3	3					7	7
Hastings		2	2					6	6
Huron								1	1
Kenora									
Kent								5	5
Lambton								3	3
Lanark								6	6
Leeds								10	10
Lennox and Addington									
Lincoln								3	3
Manitoulin									
Middlesex								23	23
Muskoka District								1	1
Nipissing District								2	2
Norfolk		2	2					3	3
Northumberland		11	11					9	9
Ontario		1	1					7	7
Oxford								2	2
Parry Sound District									
Peel								2	2
Perth								8	8
Peterborough		13	13		4	4		12	12
Prescott								9	9
Prince Edward									
Rainy River District									
Renfrew								4	4
Russell									
Simcoe		3	3		2	2		7	7
Stormont								7	7
Sudbury									
Temiskaming									
Thunder Bay District								4	4
Victoria		2	2					1	1
Waterloo		2	2					10	10
Welland		3	3		1	1		8	8
Wellington		10	10		1	1		24	24
Wentworth		13	13		8	8		25	25
York		4	4		1	1		70	70
Unascertained								1	1
Other Provinces									
Totals		93	93		26	26		382	382

TABLE No. 6.—COBOURG.

Showing the assigned causes of Insanity in the cases admitted during the year ending October 31st, 1921.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	.....	7	7	.....	4	4	3
Mental Strain, Worry and Overwork (not included in above)	.....	12	12	.....	3	3	9
Religious Excitement	.....	4	4	.....	3	3	1
Love Affairs, including seduction	.....	4	4	.....	1	1	3
Fright and Nervous Shock	.....	1	1	.....	.....	.....	1
PHYSICAL.							
Alcoholism	.....	2	2	.....	.....	.....	2
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	.....	.....	.....	.....	.....	.....	.....
Masturbation	.....	.....	.....	.....	.....	.....	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	.....	2	2	.....	1	1	1
Pregnancy	.....	1	1	.....	.....	.....	1
Parturition and Puerperium	.....	5	5	.....	1	1	4
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	3	3	.....	.....	.....	3
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	7	7	.....	4	4	3
Epilepsy	.....	1	1	.....	.....	.....	1
Other Convulsive Diseases	.....	4	4	.....	.....	.....	4
Diseases of Brain and Skull	.....	.....	.....	.....	.....	.....	.....
Senility	.....	3	3	.....	.....	.....	3
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	.....	.....	.....	.....	.....	.....	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	5	5	.....	2	2	3
Other Bodily Diseases	.....	.....	.....	.....	.....	.....	.....
HEREDITARY.							
Congenital Defect	.....	8	8	.....	4	4	4
Unascertained	.....	24	24	.....	4	4	20
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	.....	93	93	.....	27	27	66

TABLE No. 7.—COBOURG.

Showing hereditary tendency to Insanity in patients admitted during the year ending October 31st, 1921.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch		8	8
Maternal Branch		7	7
Paternal and Maternal Branches		2	2
Collateral Branches		11	11
No Hereditary Tendency		39	39
Unascertained		26	26
Totals		93	93

TABLE No. 8.—COBOURG.

Showing summary of probational discharges during the year ending October 31st, 1921.

	Male.	Female.	Total.
Number Granted Probational Discharge		21	21
Discharged, Recovered while on Probation		5	5
" Improved		6	6
" Unimproved			
Died			
Returned to Hospital		3	3
Absent on Probation, October 31st, 1921		7	7

TABLE No. 9.—COBOURG.

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia		1	1
Dysentery			
Syphilis			
Tuberculosis		5	5
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx		1	1
" " Bronchi			
" " Lungs			
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart		3	3
Arterio-sclerosis			
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia		1	1
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried Forward*		11	11

TABLE No. 9.—COBOURG.—*Continued.*

Showing the causes of death of patients who died during the year ending October 31st, 1921.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*		11	11
Diseases of the Nervous System—*Continued*			
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)		1	1
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy		1	1
Mental Diseases:—			
Exhaustion of Acute Mental Disease		2	2
Exhaustion of Chronic Mental Disease		2	2
General Paresis			
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age		6	6
Accident			
Suicide		1	1
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths or Cancer		1	1
Unascertained			
Totals		25	25

TABLE No. 10.—COBOURG.

Showing form of mental disease of patients admitted, discharged and died during the year ending October 31st, 1921.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses		5	5		1	1		1	1
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)									
(b) Delirium Tremens									
(c) Korsakow's Psychoses		1	1						
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia		1	1					1	1
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism									
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic		2	2		1	1		2	2
(b) Catatonic		26	26		7	7		3	3
(c) Paranoid		10	10						
General Paresis									
Organic Dementias:—									
(a) Cerebral Sclerosis		1	1						
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses									
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia		6	6		1	1		3	3
(b) Pre-senile Delusional Psychoses									
(c) Senile Dementia		22	22					8	8
Manic Depressive Psychoses:—									
(a) Manic States									
(b) Depressed States		11	11		2	2		4	4
(c) Mixed States									
Paranoia									
Totals—*Carried Forward*		85	85		12	12		22	22

TABLE No. 10.—COBOURG.—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year ending October 31st, 1921.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	....	85	85	....	12	12	....	22	22
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	....	3	3	....	1	1	....	2	2
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	....	5	5	....	....	....	....	1	1
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	....	....	....	....	....	....	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	....	93	93	....	*13	13	....	25	25

*Including 2 deports.

TABLE No. 11.—COBOURG.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	13	4	.....	1	.....	4
From 1 to 2 months	6	1	.....	.....	.....	1
" 2 " 3 "	5	3	.....	1	.....	5
" 3 " 4 "	2	1	1	1	.....	.....
" 4 " 5 "	1	2	.....	2	.....	1
" 5 " 6 "	4	.....	1	1	.....	1
" 6 " 9 "	6	61	.....	.....	.....	6
" 9 " 12 "	7	4	1	.....	.....	2
" 12 " 18 "	8	306	.....	2	.....	2
" 18 months to 2 years	4	.....	.....	.....	.....	.....
" 2 to 3 years	14	.....	.....	.....	.....	.....
" 3 " 4 "	4	.....	.....	.....	.....	.....
" 4 " 5 "	3	.....	.....	.....	.....	.....
" 5 " 10 "	6	.....	.....	.....	.....	.....
" 10 " 15 "	6	.....	.....	.....	.....	.....
" 15 " 20 "	2	.....	.....	.....	.....	.....
" 20 years and upwards	2	.....	.....	.....	.....	.....
Totals	*93	382	3	8	.....	22

*NOTE—This total must agree with the total admissions of the year.

THE ONTARIO HOSPITAL, HAMILTON.

November 28th, 1921.

W. W. Dunlop, Esq.,

Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

Gentlemen:—

I have great pleasure in presenting to you, in accordance with the requirements of the Statute, the Forty-sixth Annual Report of this hospital.

Our admissions were considerably in excess of former years, being 318 in number, and we believe this is largely due to the awakening of the people to the need of the early transfer to our hospitals for treatment of their mentally ill, rather than retaining them until they reach a chronic and almost hopeless state.

In reviewing the applications for admission, it is seen that there has been a marked increase in the number of patients suffering from paresis, and also drug addicts, nineteen of each having been received. These addicts are as a rule not satisfactory cases to handle, as they seldom co-operate with the physician, and we have lately advised our local Magistrate that a prison term should be given rather than that they be sent to a hospital for treatment.

The general health of the patients has been excellent and we have been spared any serious epidemic.

Dentistry.

Our Dentist's report, hereto attached, shows that during her infrequent visits considerable work has been done and health and comfort afforded to many patients. Yet we feel that much more benefit would be derived if a weekly visit of at least two days' duration was made.

Pathologist.

The report of the Pathologist, hereto attached, shows that besides the routine examination of blood, spinal fluid, etc., many interesting and instructive post-mortem examinations have been made, the nurses getting the benefit of them all.

On February 25th, about 11.35 o'clock in the morning, a disastrous fire broke out in the attic of the female side of Orchard House, directly over the central section, where installation of new lavatories and bathrooms was being proceeded with. The whole roof and upper ward, with its furnishings and much of the patients' clothing, were destroyed, but owing to the prompt and thoughtful care of the nurses and staff, all the patients were removed to safety and the furniture of the two lower wards saved.

The City Fire Department gave prompt aid in checking the ravages of the flames, and though several of their and our men were overcome by smoke, etc., no serious results followed.

Full repairs to the building have been made and the attic floor has been fireproofed and thus future danger lessened; it is hoped to have all furnishings on hand and to re-occupy the wards by December 15th next.

Owing to this misfortune, one hundred and fifty women patients had to be temporarily transferred to the hospitals at Toronto and Cobourg.

Criminal Insane.

We were much pleased to be, on June 29th, relieved of the care of the Criminal Insane and Insane Criminals through their transfer to a special section of the Ontario Reformatory, Guelph, and have no doubt that a certain opprobrium, which has been attached to this place, as it was a jail as well as a civil hospital, will now be withdrawn to our great advantage.

Crops.

In the garden and on the farm we with others suffered from the serious drought and returns were not as large as in former years; apples being 12% of the previous year's yield and peaches about 30%.

The corn crop, however, was excellent and ample to well fill our three silos.

The total revenue from the farm operations we believe to be the best in years.

The beauty of our grounds is being marred to some extent by the loss of most of our Norway Spruce owing to a fungoid disease which energetic treatment has failed to check.

Requirements.

We are still anxiously waiting for an improvement in the lighting and ventilation of Ward 9 and hope that this year the work may be proceeded with as it is absolutely necessary.

The erection of a building for our coaling and ice making plant is also urgently needed and it is sincerely hoped that the appropriation asked for may be granted.

Queen St. Steps.—The replacement in concrete and iron of these steps *will have to be made* this year, unless it is decided to absolutely close up this convenient and practically necessary means of access to our pumping station at Queen and Markland Streets and the west end of the city.

Rear Entrance, Main Building.—As all patients and employees from outer buildings who attend the weekly Sunday services, picture exhibitions and dances in the Amusement Hall in the Main Building must approach by an irregular and awkward series of steps, it is urgently hoped that the slight expense necessary for a stairway directly outwards from the farmers' landing will be authorized, as we have already on hand from our old mortuary the necessary brick and slates for roofing as well as foundation stone. This change would also provide a good rear exit from the centre building in case of fire, which we have not at present.

In the laundry additional machinery as well as an electric elevator is much required.

Thanking you most sincerely for the ready advice and assistance at all times given.

I am,

Your obedient servant,

W. M. English,
Superintendent.

DENTISTRY REPORT.

For the Year November 1st, 1920, to October 31st, 1921.

Sir:—

I beg to furnish a full report of work done in this hospital during my monthly visits for the past year.

Fillings	334
Extractions	475
Full Dentures	45
Partial Dentures	17
Crowns	1
Scaled	152
Examined and found O.K.	60
Total operations	1,093

(Sgd.) Josephine Wells.

PATHOLOGIST REPORT.

November 1st, 1920, to October 31st, 1921.

Dr. W. M. English,
Superintendent, Ontario Hospital, Hamilton, Ont.

Sir:—

I beg herewith to submit the summary of work done in my department during the year noted above. More time has been given this work than in the past years and a larger scope covered. Some photography of interesting cases has been done and some photomicrography.

The treatment of nervous lues and other syphilitic manifestations has been carried out more fully than in the past.

Autopsy work for the year is noted and many microsections were done in this connection. The nurses were given an active part in this work and have gained a great deal by their hearty attention to this subject.

I am hoping for much expanse in this work when our new mortuary is opened, and with the frozen section equipment, which is promised, trust we will have something to add to our next year's report.

Please note that the continuation of our routine Wassermann work has yielded uniform results, the year 1921 giving 8.17% of admissions with positive tests, compared with 7.99% in 1920.

Attached find tabular charts of work done.

W. R. Jaffray,
Pathologist.

Total Admissions.	Wassermann Reaction.	Percentage.
318	positive—26	8.17

Disease suffered from:—	Positive Reaction.	Percentages.	
General Paresis	16	5.04	5.04%
Dementia Præcox	4	1.26	3.13%
Arterio Sclerotic Insanity	2	0.62	
Imbecile	1	0.31	
Drug Addicts	3	0.94	
		8.17	

In this analysis it is seen that syphilis has an apparent bearing in the psychosis in 5.04% only, while the clinical findings did not indicate that the remaining 3.13% were in any way due to syphilitic infection.

Fifteen spinal fluid tests were done as diagnostic procedure.

	Autopsies.	Arsphenamine Injections.		Autopsies.	Arsphenamine Injections.
Nov.	0	0	May	2	4
Dec.	1	14	June	1	0
Jan.	3	43	July	0	0
Feb.	2	14	Aug.	1	2
Mar.	1	13	Sept.	3	0
April	2	17	Oct.	4	8
				20	115

In our treatment of syphilis of the nervous system the only attempt at spinal treatment was the production of a spinal negative pressure immediately following the intravenous injection of the arsphenamine. The product of the Provincial Board of Health was used throughout this work. Only one case showed any sort of reaction and this was of the nitritoid type and occurred on three consecutive treatments. In the cases which showed active lesions the therapeutic effect was efficient.

W. R. Jaffray,
Pathologist.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, HAMILTON.

For the Year Ending October 31st, 1921.

TABLE No. 1.—HAMILTON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	656	639	1,295			
In Residence October 31st, 1920				639	582	1,221
Admitted during year 1921:—						
By Warrant	63	30	93			
By Medical Certificate	96	113	209	172	144	316
Voluntary	13	1	14			
Total number under treatment during year, Nov. 20th to Oct. 21st				811	726	1,537
Discharges during year:—						
As recovered	22	29	51			
As improved	36	58	94			
As unimproved	8	4	12			
As not insane						
Total number discharged during year	66	91	157			
Died	67	54	121			
Deported	1	2	3			
Eloped	7		7			
Transferred	71	150	221	212	297	509
Remaining in Hospital October 31st, 1921	212	297	509	599	429	1,028
Total number admitted since opening of Hospital				4,301	4,139	8,440
Total number discharged since opening of Hospital	1,679	1,888	3,567			
Total number died since opening of Hospital	1,502	1,321	2,823			
Total number deported since opening of Hospital	76	13	89			
Total number eloped since opening of Hospital	157	11	168			
Total number transferred since opening of Hospital	288	477	765	3,702	3,710	7,412
Total remaining in Hospital October 31st, 1921				599	429	1,028
Daily average population	630	481	1,111			
Collective days' stay of all patients in residence during year	229,895	175,631	405,526			
Number of applications on file	6	7	13			

TABLE No. 2.—HAMILTON.

Showing social state and religion of patients admitted during the year.

	Admissions of Year.			In Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	75	44	119	417	190	607
Married	82	78	160	143	193	336
Widowed	14	22	36	35	43	78
Divorced	1	.....	1	1	2	3
Separated	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	3	1	4
Totals	172	144	316	599	429	1,028
RELIGION.						
Baptists	9	10	19	36	33	79
Congregationalists	.....	.....	.....	5	.....	5
Episcopalians	39	26	65	101	69	170
Methodists	30	26	56	115	80	195
Presbyterians	27	29	56	95	81	176
Roman Catholics	23	26	49	103	66	169
Other Denominations	31	25	56	97	71	168
Unascertained	13	2	15	47	29	76
Totals	172	144	316	599	429	1,028

TABLE No. 3.—HAMILTON.

Showing the nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	172	144	316
Total Born in Canada	111	98	209
Armenia			
Assyria			
Austria	2		2
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	29	28	57
France			
Finland			
Galicia			
Germany	1		1
Greece			
Holland			
Hungary			
Ireland	7	2	9
Italy	3	1	4
Japan			
Macedonia			
Other British Possessions			
Norway			
Poland	1	2	3
Roumania			
Russia	4	1	5
Scotland	7	8	15
South America			
Spain			
Sweden	1		1
Turkey			
Ukranian	1		1
United States	4	3	7
West Indies			
Unascertained	1	1	2
Totals	172	144	316

TABLE No. 4.—HAMILTON.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	3	.....	3
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	8	5	13
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	48	1	49
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	33	.....	33
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	14	10	24
Domestic Service:— Waiters, Cooks, Servants, etc.	2	26	28
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	6	18	24
Miners, Marine Engineers, Railway Employees, Seamen, etc.	8	.....	8
Labourers	47	.....	47
No Occupation	3	83	86
Unascertained	.....	1	1
Totals	172	144	316

TABLE No. 5.—HAMILTON.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District							4		4
Brant	8	4	12	3	1	4	47	36	83
Bruce	2	1	3	1		1	1	2	3
Carleton							1	1	2
Dufferin	3	6	9	1	2	3	4	11	15
Dundas							1		1
Durham									
Elgin	1		1				3	1	4
Essex	1		1				4		4
Frontenac	2		2						
Glengarry									
Grenville									
Grey	10	12	22	4	1	5	57	24	81
Haldimand	5	3	8	2		2	21	11	32
Halton	3	2	5		1	1	15	12	27
Hastings									
Huron							1	1	2
Kenora									
Kent									
Lambton								1	1
Lanark									
Leeds									
Lennox and Addington									
Lincoln	11	6	17	1		1	28	18	46
Manitoba							1		1
Manitoulin									
Middlesex		1	1				1	1	2
Muskoka District							2		2
New Brunswick	1		1				1		1
Nipissing District							1	2	3
Norfolk	2	6	8	1	3	4	14	21	35
Northumberland	2		2				2		2
Ontario							1		1
Oxford							3		3
Parry Sound District									
Peel	1	1	2				3	2	5
Perth							2	1	3
Peterborough									
Prescott									
Prince Edward									
Quebec									
Rainy River District									
Renfrew									
Russell							1		1
Simcoe	1	1	2				9	2	11
Stormont									
Sudbury							1		1
Temiskaming	1		1				1		1
Thunder Bay District								2	2
Victoria							1	1	2
Waterloo	11	14	25	4	1	5	60	56	116
Welland	15	17	32	3		3	44	40	84
Wellington	10	14	24	3	3	6	55	34	89
Wentworth	81	55	136	40	17	57	200	135	335
York	1	1	2		1	1	6	13	19
Unascertained							3	1	4
Other Provinces									
Totals	172	144	316	63	30	93	599	429	1,028

TABLE No. 6.—HAMILTON.

Showing the assigned Causes of Insanity in the cases admitted during year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	16	9	25	3	1	4	21
Mental Strain, Worry and Overwork (not included in above)	20	28	48	4	6	10	38
Religious Excitement	1	2	3	1	1	2	1
Love Affairs, including seduction	2	2	4	.....	1	1	3
Fright and Nervous Shock	3	.....	3	.....	.....	.....	3
PHYSICAL.							
Alcoholism	9	.....	9	.....	.....	.....	9
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	2	1	3	.....	.....	.....	3
Masturbation	1	.....	1	.....	.....	.....	1
Insolation	2	.....	2	1	.....	1	1
Accident or Injury	5	2	7	.....	.....	.....	7
Pregnancy	.....	5	5	.....	.....	.....	5
Parturition and Puerperium	.....	4	4	.....	.....	.....	4
Lactation	.....	.....	.....	.....	.....	.....	.....
Climacteric Period	.....	4	4	.....	1	1	3
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	.....	.....	.....	.....	.....	.....
Epilepsy	3	1	4	.....	.....	.....	4
Other Convulsive Diseases	1	.....	1	1	.....	1	.....
Diseases of Brain and Skull	.....	2	2	.....	.....	.....	2
Senility	8	7	15	1	.....	1	14
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	15	10	25	.....	2	2	23
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	.....	.....	.....	.....	.....	.....
Other Bodily Diseases	18	19	37	5	6	11	26
HEREDITARY.							
Congenital Defect	8	7	15	.....	.....	.....	15
Unascertained	58	41	99	6	6	12	87
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	172	144	316	22	24	46	270

TABLE No. 7.—HAMILTON.

Showing hereditary tendency to Insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	8	12	20
Maternal Branch	8	11	19
Paternal and Maternal Branches	.....	.....	.....
Collateral Branches	4	3	7
No Hereditary Tendency	141	113	254
Unascertained	11	5	16
Totals	172	144	316

TABLE No. 8.—HAMILTON.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	66	91	157
Discharged, Recovered While on Probation	22	29	51
" Improved	36	58	94
" Unimproved	8	4	12
Died	67	54	121
Returned to Hospital	10	16	26
Absent on Probation on October 31st, 1921	15	10	25

TABLE No. 9.—HAMILTON.

Showing the Causes of death of Patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia	1		1
Dysentery	2		2
Syphilis	1		1
Tuberculosis	8	1	9
Jaundice			
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus		1	1
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Enteritis Colitis	2		2
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas	1		1
" " Peritoneum	2		2
Intestinal Obstruction			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi		2	2
" " Lungs	12	1	13
" " Pleura	1		1
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	8	4	12
Arterio-sclerosis	5	5	10
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia	2		2
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System	4	5	9
Purpura Hæmorrhage			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried Forward*	49	19	68

TABLE No. 9.—HAMILTON.—*Continued.*

Showing the Causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	49	19	68
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	1		1
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy		1	1
Mental Diseases:—			
Exhaustion of Acute Mental Disease	2	12	14
Exhaustion of Chronic Mental Disease	5	14	19
General Paresis	5	2	7
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke	1		1
Debility of Old Age			
Accident			
Suicide	1	1	2
Surgical Diseases			
Gynæcological Diseases		1	1
Malignant New Growths, or Cancer	1	1	2
Died on Probation	2	3	5
Totals	67	54	121

TABLE No. 10.—HAMILTON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium								1	1
(b) Infection Delirium	1	3	4	1	7	8		2	2
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium		1	1						
(b) Acute Confusional Psychoses				1	2	3			
(c) Neurasthenia	2		2	3		3			
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)	5		5	4	1	5	1		1
(b) Delirium Tremens				1		1			
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia	5		5	1		1			
(f) " Paranoia				1		1			
(g) " Paresis									
(h) Morphinism	13	6	19	4	3	7			
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
(c) Hyperthyroigenous				1		1			
Dementia Præcox:—									
(a) Hebaphrenic	8	5	13	6	10	16		1	1
(b) Catatonic	26	48	74	7	21	28	13	6	19
(c) Paranoid	16	13	29	10	7	17	5	2	7
General Paresis	14	5	19	2		2	6	3	9
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses	12	3	15	2		2	7	2	9
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia	9	14	23	4	13	17	6	5	11
(b) Pre-senile Delusion Psychoses	3	6	9	1	1	2	1	2	3
(c) Senile Dementia	20	15	35	1	3	4	12	17	29
Manic Depressive Psychoses:—									
(a) Manic States	7	9	16	8	17	25	6	7	13
(b) Depressed States	9	6	15	3		3	1	1	2
(c) Mixed States					1	1	1		1
Paranoia	2		2		1	1			
Totals—*Carried Forward*	152	134	286	61	87	148	59	49	108

TABLE No. 10.—HAMILTON—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	152	134	286	61	87	148	59	49	108
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	4	3	7	....	1	1	....	....	....
(b) Hysterical Psychoses	....	....	....	....	....	....	....	1	1
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
(d) Chorea	1	....	1	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	9	7	16	4	2	6	7	3	10
(b) Idiocy	....	....	....	....	....	....	1	....	1
Not Diagnosed	5	....	5	1	1	2	....	1	1
Not Insane	1	....	1	....	....	....	....	....	....
Totals	172	144	316	66	91	157	67	54	121

TABLE No. 11.—HAMILTON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	31	22	....	1	1	14
From 1 to 2 months	16	28	....	1	....	10
" 2 " 3 "	16	19	3	2	....	5
" 3 " 4 "	10	25	8	2	....	9
" 4 " 5 "	8	25	6	7	....	6
" 5 " 6 "	2	11	11	12	....	2
" 6 " 9 "	25	51	11	21	1	6
" 9 " 12 "	5	31	3	14	2	7
" 12 " 18 "	32	55	5	11	2	5
" 18 months to 2 years	2	30	....	8	....	7
" 2 to 3 years	37	68	1	3	1	2
" 3 " 4 "	18	48	1	3	3	4
" 4 " 5 "	24	49	....	2	2	6
" 5 " 10 "	46	160	1	4	....	7
" 10 " 15 "	14	141	....	1	....	9
" 15 " 20 "	10	77	1	1	....	6
" 20 years and upwards	20	185	....	1	....	16
Totals	316	1,028	51	94	12	121

THE ONTARIO HOSPITAL, KINGSTON.

Kingston, December 1st, 1922.

W. W. DUNLOP, ESQ.,
Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

DEAR SIR:—

In reply to your letter of the 29th November, I herewith enclose copy of Statistical Report for the year ending October 31st, 1921.

I have the honour to remain,

Your obedient servant,

EDWARD RYAN.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, KINGSTON.

For the Year Ending October 31st, 1921.

TABLE No. 1.—KINGSTON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	311	268	579			
In Residence October 31st, 1920	.....	.....	.....	322	268	590
Admitted during year 1920:—						
By Warrant	2	.....	2			
By Medical Certificate	71	72	143	73	72	145
Total number under treatment during year	.....	.....	.....	395	340	735
Discharges during year:—						
As recovered	16	8	24			
As improved	29	32	61			
As unimproved	32	4	36			
As not insane	.....	.....	.....			
Total number discharged during year	77	44	121			
Died	19	22	41			
Deported	.....	.....	.....			
Eloped	1	.....	1			
Transferred	.....	.....	.....	97	66	163
Remaining in Hospital October 31st, 1921	.....	.....	.....	298	274	572
Total number admitted since opening of Hospital	.....	.....	.....	3,339	2,769	6,108
Total number discharged since opening of Hospital	1,623	1,366	2,989			
Total number died since opening of Hospital	1,037	817	1,854			
Total number deported since opening of Hospital	15	6	21			
Total number eloped since opening of Hospital	120	1	121			
Total number transferred since opening of Hospital	246	305	551	3,041	2,493	5,536
Total remaining in Hospital	.....	.....	.....	298	274	572
Daily average population	292.2	266.8	559			
Collective days' stay of all patients in residence during year	106,650	97,371	204,021			
Number of applications on fyle	2	3	5			

TABLE No. 2.—KINGSTON.

Showing social state and religion of patients admitted during the year.

	In Residence.			Admissions of Year.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	217	136	353	35	22	57
Married	80	114	194	34	38	72
Widowed	.....	22	22	4	10	14
Divorced	.....	1	1	.....	1	1
Separated	1	1	2	.....	1	1
Unascertained	.....	.....	.....	.....	.....	.....
Totals	298	274	572	73	72	145
RELIGION.						
Baptists	6	3	9	.....	.....	.....
Congregationalists	.....	1	1	.....	.....	.....
Episcopalians	47	39	86	12	11	23
Methodists	86	101	187	25	24	49
Presbyterians	34	29	63	10	11	21
Roman Catholics	78	75	153	16	20	36
Other Denominations	38	16	54	5	2	7
Unascertained	9	10	19	5	4	9
Totals	298	274	572	73	72	145

TABLE No. 3.—KINGSTON.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	73	72	145
Total born in Canada	67	63	130
Armenia			
Assyria			
Austria			
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	3	6	9
France			
Finland			
Galicia			
Germany	1	1	2
Greece			
Holland			
Hungary			
Ireland			
Italy			
Japan			
Macedonia			
Other British Possessions	1		1
Poland			
Norway			
Roumania			
Russia		1	1
Scotland	1	1	2
South America			
Spain			
Sweden			
Turkey			
United States			
West Indies			
Other			
Unascertained			
Totals	73	72	145

TABLE No. 4.—KINGSTON.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	1	.....	1
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	9	.....	9
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	24	.....	24
Mechanics at Outdoor Vocations:— Railway and Stationery Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	5	.....	5
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	9	4	13
Domestic Service:— Waiters, Cooks, Servants, ex-Soldiers, etc.	8	.....	8
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	1	63	64
Miners, Marine Engineers, Railway Employees, Seamen, etc.	.....	.....	.....
Labourers	12	.....	12
No Occupation	4	5	9
Unascertained	.....	.....	.....
Other	.....	.....	.....
Totals	73	72	145

TABLE No. 5.—KINGSTON.

Showing the counties and districts from which Patients have been admitted during the Year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma		1	1					1	1
Brant									
Bruce									
Carleton							17	11	28
Dufferin	10	1	11				12	1	13
Dundas							2		2
Durham	5		5	1		1	5	7	12
Elgin									
Essex									
Frontenac	22	22	44				45	61	106
Glengarry							3	4	7
Grenville							1	2	3
Grey								1	1
Haldimand									
Haliburton							1		1
Halton									
Hastings	11	24	35				53	58	111
Huron									
Kenora									
Lambton								1	1
Lanark							5	5	10
Leeds		1	1				7	3	10
Lennox and Addington	4	6	10				22	17	39
Lincoln									
Manitoulin									
Middlesex							1		1
Muskoka District									
Nipissing District									
Norfolk							1		1
Northumberland	6	3	9	1		1	38	32	70
Ontario								2	2
Oxford									
Parry Sound District									
Peel									
Perth									
Peterborough	3	1	4				6	3	9
Prescott							1	2	3
Prince Edward	1	5	6				21	14	35
Rainy River District									
Renfrew	8	6	14				38	36	74
Russell								1	1
Simcoe									
Stormont							1	2	3
Sudbury									
Temiskaming									
Thunder Bay District							1		1
Victoria							3		3
Waterloo									
Welland							1	1	2
Wellington									
Wentworth							1	3	4
York	1	1	2				9	5	14
Unascertained	2	1	3				3	1	4
Other Provinces									
Totals	73	72	145	2		2	298	274	572

TABLE No. 6.—KINGSTON.

Showing the assigned causes of Insanity in the cases admitted during year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	2	.....	2	1	.....	1	.....
Mental Strain, Worry and Overwork (not included in above)	6	6	12	5	5	10	.....
Religious Excitement	.....	1	1	.....	.....	.....	.....
Love Affairs, including seduction	.....	2	2	.....	1	1	.....
Fright and Nervous Shock	.....	.....	.....	.....	.....	.....	.....
PHYSICAL.							
Alcoholism	12	4	16	10	3	13	.....
Sexual Excess	.....	.....	.....	.....	.....	.....	.....
Venereal Diseases	4	2	6	4	2	6	.....
Masturbation	1	.....	1	1	.....	1	.....
Insolation	.....	.....	.....	.....	.....	.....	.....
Accident or Injury	1	.....	1	1	.....	1	.....
Pregnancy	.....	2	2	.....	2	2	.....
Parturition and Puerperium	.....	2	2	.....	2	2	.....
Lactation	.....	2	2	.....	2	2	.....
Climacteric Period	.....	9	9	.....	3	3	.....
Fevers	.....	.....	.....	.....	.....	.....	.....
Privation and Overwork	.....	2	2	.....	2	2	.....
Epilepsy	1	.....	1	1	.....	1	.....
Other Convulsive Diseases	.....	.....	.....	.....	.....	.....	.....
Diseases of Brain and Skull	4	.....	4	3	.....	3	.....
Senility	11	16	27	11	16	27	.....
Exophthalmic Goitre	.....	.....	.....	.....	.....	.....	.....
Epidemic Influenza	.....	.....	.....	.....	.....	.....	.....
Abuse of Drugs	5	2	7	5	2	7	.....
Loss of Special Sense	.....	.....	.....	.....	.....	.....	.....
Uræmia	.....	.....	.....	.....	.....	.....	.....
Other Auto-infection	.....	1	1	.....	1	1	.....
Other Bodily Diseases	3	5	8	2	5	7	.....
HEREDITARY.							
Congenital Defect	11	4	15	16	13	29	.....
Unascertained	12	12	24	13	13	26	.....
Not Insane	.....	.....	.....	.....	.....	.....	.....
Totals	73	72	145	73	72	145	.....

TABLE No. 7.—KINGSTON.

Showing hereditary tendency to Insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	4	12	16
Maternal Branch	8	9	17
Paternal and Maternal Branches	1	3	4
Collateral Branches	8	8	16
No Hereditary Tendency	.....	1	1
Not Insane	.....	.....	.....
Unascertained	52	39	91
Totals	73	72	145

TABLE No. 8.—KINGSTON.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	14	29	43
Discharged, Recovered While on Probation	1	5	6
" Improved	10	21	31
" Unimproved	.....	.....	.....
Died	.....	.....	.....
Returned to Hospital	2	1	3
Absent on Probation October 31st, 1921	1	2	3
	.....	.....	.....

TABLE No. 9.—KINGSTON.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis	3	3	6
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Stomach			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi		2	2
" " Lungs	4	4	8
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart		1	1
Arterio-sclerosis	1	4	5
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia		1	1
Leukæmia			
Exophthalmic Goitre			
Adrenal Glands			
Diseases of the Genito-Urinary System	1		1
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	1		1
Totals—*Carried Forward*	10	15	25

TABLE No. 9.—KINGSTON—*Continued.*

Showing the cause of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	10	15	25
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)		1	1
Epilepsy	2		2
Mental Diseases:—			
Exhaustion of Acute Mental Disease	1	1	2
Exhaustion of Chronic Mental Disease	1	1	2
General Paresis	5	2	7
Died while on probation, cause unknown			
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age			
Accident			
Suicide		1	1
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer		1	1
Totals	19	22	41

TABLE No. 10.—KINGSTON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium	....	1	1	....	1	1	....	....	....
(b) Infection Delirium	....	....	....	....	....	....	....	....	....
(c) Post Infection Psychoses	....	....	....	....	....	....	....	....	....
Exhaustion Psychoses:—									
(a) Collapsed Delirium	1	2	3	....	....	....	1	....	1
(b) Acute Confusional Psychoses	....	....	....	....	1	1	....	2	2
(c) Neurasthenia	1	....	1	1	1	2	....	....	....
Intoxication Psychoses:—									
(a) Acute Intoxications	....	....	....	....	....	....	....	....	....
(b) Chronic	....	....	....	....	....	....	....	....	....
(a) Alcoholism (acute and chronic)	13	2	15	13	....	13	....	....	....
(b) Delirium Tremens	....	1	1	....	....	....	....	....	....
(c) Korsakow's Psychoses	....	2	2	....	....	....	....	....	....
(d) Acute Alcoholic Hallucinosis	....	....	....	....	....	....	....	....	....
(e) Alcoholic Hallucinatory Dementia	....	....	....	....	....	....	....	....	....
(f) " Paranoia	1	....	1	2	....	2	....	....	....
(g) " Paresis	....	....	....	....	....	....	....	....	....
(h) Morphinism	....	1	1	1	1	2	....	....	....
(i) Cocainism	....	....	....	....	....	....	....	....	....
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses	....	....	....	....	....	....	....	....	....
(b) Cretinism	....	....	....	....	....	....	....	....	....
Dementia Præcox:—									
(a) Hebaphrenic	10	2	12	15	1	16	2	2	4
(b) Catatonic	5	14	19	9	11	20	1	4	5
(c) Paranoid	....	2	2	8	3	11	3	....	3
General Paresis	4	2	6	1	1	2	5	2	7
Organic Dementias:—									
(a) Cerebral Sclerosis	....	....	....	....	....	....	....	....	....
(b) Huntingdon's Chorea	1	....	1	1	....	1	....	1	1
(c) Multiple Sclerosis	....	....	....	....	....	....	....	....	....
(d) Cerebral Syphilis	....	....	....	....	....	....	....	....	....
(e) Tabetic Psychoses	....	....	....	....	....	....	....	....	....
(f) Arterio Sclerotic Psychoses	....	....	....	....	....	....	....	....	....
(g) Cerebral Tumor, Abscess, Hæmorrhage	1	....	1	....	....	....	....	....	....
Involution Psychoses:—									
(a) Melancholia	4	5	9	2	2	4	1	1	2
(b) Pre-senile Delusional Psychoses	....	....	....	....	....	....	....	2	2
(c) Senile Dementia	9	11	20	3	1	4	3	5	8
Manic Depressive Psychoses:—									
(a) Manic States	7	9	16	3	7	10	....	....	....
(b) Depressed States	4	8	12	4	11	15	....	1	1
(c) Mixed States	....	....	....	....	....	....	....	....	....
Paranoia	2	4	6	1	....	1	....	....	....
Totals—*Carried Forward*	63	66	129	64	41	105	16	20	36

TABLE No. 10.—KINGSTON.—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	63	66	129	64	41	105	16	20	36
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	1	....	1	3	....	3	2	....	2
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	9	6	15	10	3	13	1	1	2
(b) Idiocy	....	....	....	....	....	....	....	1	1
Not Diagnosed	....	....	....	....	....	....	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	73	72	145	77	44	121	19	22	41

TABLE No. 11.—KINGSTON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	24	17	7	3	4	4
From 1 to 2 months	11	6	3	8	....	3
" 2 " 3 "	10	6	7	2	1	2
" 3 " 4 "	2	9	....	1	4	1
" 4 " 5 "	....	8	2	5	2	1
" 5 " 6 "	2	3	1	4	1	....
" 6 " 9 "	4	22	3	14	4	2
" 9 " 12 "	2	13	1	9	3	....
" 12 " 18 "	7	29	....	5	8	1
" 18 months to 2 years	2	14	....	2	3	2
" 2 to 3 years	6	37	....	2	4	5
" 3 " 4 "	2	24	....	2	....	2
" 4 " 5 "	4	22	....	....	....	3
" 5 " 10 "	4	93	....	2	2	7
" 10 " 15 "	2	53	....	1	....	2
" 15 " 20 "	1	57	....	1	....	4
" 20 years and upwards	1	159	....	....	....	2
Unascertained	61	....	....	....	....	....
Totals	145	572	24	61	36	41

THE ONTARIO HOSPITAL, LONDON.

November 15th, 1921.

W. W. Dunlop, Esq.,
Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

Sir:—

I beg to submit the Fifty-first Annual Report of The Ontario Hospital, London, for the year ending October 21st, 1921.

Population.

By referring to Table No. 1, you will see that we had 280 admissions during the year, the largest number of admissions in any one year since the institution was opened. We discharged 138 patients, almost 40% of the admissions. The deaths during the year numbered 121. The population at the beginning of the year was 1,186, and at the end of the year, 1,197.

Change in Staff.

The death of Dr. E. A. Young, which took place August 8th, 1921, was greatly deplored by everyone connected with our hospital. His death was a distinct loss to the medical service of the Ontario Hospitals. He served with distinction overseas and on his return was appointed O.C. of the Cobourg Military Hospital. He devoted himself with great enthusiasm and energy to the study, care and treatment of the mentally afflicted.

Dr. G. H. Stevenson has been promoted to the position made vacant by the death of Dr. Young.

Improvements.

I am glad to be able to report the completion of the improvements in the kitchen of the North Building. This kitchen is now up-to-date in every respect.

The most urgent requirements at the present time is a complete renewal of the plumbing and sanitary arrangements in the Main Building. The plumbing in this building is very antiquated and far behind modern requirements. I have called attention to this on many occasions and I would again urge that an appropriation sufficiently large to do this most necessary work be granted.

Wassermann Tests.

Investigations were commenced during the year to determine what percentage of patients that had been inmates for twenty-five years or over showed positive blood Wassermann test. One hundred and forty-six patients have been residents for this period; 99 were examined and in only one case was a positive test found.

A routine Wassermann test was done on all patients admitted during the year with the exception of a few who for various reasons it was not possible to take.

In all cases giving a positive blood test or showing neurological symptoms a cerebro-spinal fluid examination was also made. Of the patients admitted 272 were examined, 252 tests were negative, four doubtful and 19 or 6.9% positive.

Since we began to make this routine test in the year 1917, we have tested 1,131 consecutive admissions with the result that 125 or slightly over 10% gave a positive result on the blood and 64 or over 5% of these also showed involvement of the cerebro-spinal system. It is only in this last group that we are justified in considering syphilis as the cause of the mental disease from which the patient suffered.

Summary of Positive Wassermanns.

No.	Sex.	Age.	Blood Wass.	Cerebro-Spinal Fluid.				Clinical Diagnosis.
				Wassermann.	Globulin (Noguchi).	C.C. per cm.	Colloidal Gold.	
1	M	64	Plus 4	Negative	Not increased	..	0110000000	Alcoholic dementia
2	M	42	Plus 3	Plus 4 in .2 cc.	Slight incre'se	5	5554321000	G.P.I.
3	F	63	Plus 4	Plus 4 in .2 cc.	Not increased	1	1210000000	Manic Depressive
4	M	25	Plus 4	Plus 4 in .2 cc.	Considerable increase	20	5433322100	G.P.I.
5	M	50	Plus 4	Plus 4 in .2 cc.	Considerable increase	5	5553321000	G.P.I.
6	M	51	Plus 4	Plus 4 in .2 cc.	Considerable increase	6	5554310000	G.P.I.
7	F	25	Plus 4	Negative	Not increased	1	1100000000	Paralysis agitans
8	M	51	Plus 4	Plus 4 in .2 cc.	Markedly increased	80	5555553200	G.P.I.
9	M	43	Plus 4	Plus 4 in .2 cc.	Considerable increase	10	5555554310	G.P.I.
10	M	..	Plus 4	Plus 4 in .2 cc.	Considerable increase.	21	5555410000	G.P.I.
11	F	27	Plus 4	Negative	Not increased	0	0000000000	Catatonic D.P.
12	M	46	Plus 4	Negative	Slight incre'se	27	5543210000	G.P.I.
13	F	35	Plus 4	.....	.....	.....	.....	Manic D.P.
14	M	45	Neg.	Plus 4 in .2 cc.	Slight incre'se	5	5543100000	G.P.I.
15	M	55	Plus 4	Plus 4 in .2 cc.	Considerable increase	30	5555532110	G.P.I.
16	F	37	Plus 2	.....	.....	.....	.....	Epileptic.
17	M	61	Plus 4	Plus 4 in .2 cc.	Slight incre'se	3	5555321000	G.P.I.
18	F	30	Plus 4	.....	.....	.....	.....	Morphinism
19	M	..	Plus 3	.....	.....	.....	.....	.....

Treatment of Syphilis.

During the past year we have attempted to treat 29 patients whose blood serum yielded a positive Wassermann reaction. These cases included all but end-stage paretics and several very old patients. The treatment has consisted of repeated courses of arsphenamin, except in the case of paretics, who received four-tenths of a gramme of arsphenamin weekly with complete spinal drainage every three to six weeks, following an intravenous treatment. In addition, most of the patients received potassium iodide by mouth; no mercury was given. These 29 patients have received a total of 339 intravenous injections of phen-arsenamine which is the product of the Provincial Board of Health. Of the 17 non-paretic cases, eight have now negative Wassermann reactions, three of whom having improved sufficiently to return to their homes; two other cases have

refused further treatment and another was able to return home, although her Wassermann was still positive. Of the twelve paretics, two have been able to leave the hospital. Both the blood and spinal fluid of one of these cases became quite normal with intensive treatment, but at the last test the signs were weakly positive. He is, however, able to carry on at his work when he can get it and is apparently as well as he was before the onset of the disease. The other paretic was discharged improved, although the reactions were still strongly positive, and nothing further has been heard of him. Two paretics who received treatment died during the year. Another patient was transferred to another hospital. The remainder are still with us and their treatment is being continued. Several of them have shown improvement in their serological and neurological findings, but there has been no apparent improvement mentally. In treating cases of general paresis we are not sanguine of producing cures, as we are not unaware of the extremely bad prognosis both in treated and untreated cases. We are hoping to show, however, that the life of the patient may be prolonged and possibly in certain cases that the disease may be arrested. We expect to report something definite in this regard later, but we are already convinced that treatment does prolong the life of the patient suffering from general paresis; moreover, if we can demonstrate that the disease can be arrested even in the later stages the extreme importance of early diagnosis and intensive treatment before deterioration has set in will become apparent.

I am very much indebted to Dr. G. H. Stevenson and Dr. F. Luney for their work in connection with the above tests.

I have the honour to be,

Your obedient servant,

W. J. Robinson,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, LONDON.

For the Year Ending October 31st, 1921.

TABLE No. 1.—LONDON.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female	Total.	Male.	Female.	Total.
Capacity of Hospital						
In Residence, October 31st, 1920				590	596	1,186
Admitted during year 1921:—						
By Warrant	17	8	25			
By Medical Certificate	113	142	255	130	150	280
Total number under treatment during year				720	746	1,466
Discharges during year:—						
As recovered	26	32	58			
As improved	35	31	66			
As unimproved	10	4	14			
As not insane						
Total number discharged during year	71	67	138			
Died	58	63	121			
Deported	1		1			
Eloped	6	1	7			
Transferred						
Remaining in Hospital, October 31st, 1921	136	131	267	584	615	1,199
Total number admitted since opening of Hospital				4,647	4,361	9,008
Total number discharged since opening of Hospital	2,061	1,998	4,059			
Total number died since opening of Hospital	1,572	1,412	2,984			
Total number deported since opening of Hospital	18	8	26			
Total number eloped since opening of Hospital	163	18	181			
Total number transferred since opening of Hospital	249	310	559	4,063	3,746	7,809
Total remaining in Hospital, October 31st, 1921				584	613	1,199
Daily average population	572	597	1,169			
Collective days' stay of all patients in residence during year	208,803	218,244	427,047			
Number of applications on fyle						

TABLE No. 2.—LONDON.

Showing social state and religion of patients admitted during the year.

	In Residence.			Admissions of Year.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single				61	39	100
Married				58	84	142
Widowed since 1907				11	22	33
Divorced					3	3
Separated					2	2
Unascertained						
Totals				130	150	280
RELIGION.						
Baptists				7	8	15
Congregationalists						
Episcopalians				17	33	50
Methodists				34	38	72
Presbyterians				23	34	57
Roman Catholics				21	16	37
Other Denominations				10	5	15
Unascertained				18	16	34
Totals				130	150	280

TABLE No. 3.—LONDON.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	130	150	280
Total born in Canada	91	122	213
Armenia			
Assyria			
Austria	1		1
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark		1	1
England	26	14	40
France			
Finland			
Galicia			
Germany	1		1
Greece	1		1
Holland			
Hungary			
Ireland	3	4	7
Italy			
Japan			
Macedonia			
Other British Possessions			
Norway			
Roumania	1		1
Russia	2		2
Scotland	1	3	4
South America			
Spain			
Sweden			
Turkey			
United States	1	3	4
West Indies			
Unascertained	2	3	5
Totals	130	150	280

TABLE No. 4.—LONDON.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc,	.....	.....	.....
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	16	3	19
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	48	.....	48
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	10	.....	10
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	9	5	14
Domestic Service:— Waiters, Cooks, Servants, etc.	2	11	13
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	3	118	121
Miners, Marine Engineers, Railway Employees, Seamen, etc.	.....	.....	.....
Labourers	32	.....	32
No Occupation	4	8	12
Unascertained	6	5	11
Totals	130	150	280

TABLE No. 5.—LONDON.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District							1	1	2
Brant	2		2				3	4	7
Bruce	5	14	19	2	3	5	43	54	97
Carleton									
Dufferin								1	1
Dundas									
Durham								1	1
Elgin	15	10	25	1		1	45	46	91
Essex	25	24	49				62	70	132
Frontenac									
Glengarry									
Grenville									
Grey		1	1				3	4	7
Haldimand									
Haliburton									
Halton								1	1
Hastings									
Huron	10	11	21	2	2	4	61	77	138
Kenora									
Kent	5	10	15	1		1	49	41	90
Lambton	9	12	21				60	47	107
Lanark									
Leeds									
Lennox and Addington									
Lincoln									
Manitoulin									
Middlesex	36	42	78	6	1	7	140	152	292
Muskoka District									
Nipissing District									
Norfolk		1	1					2	2
Northumberland									
Ontario							2		2
Oxford	12	11	23	2		2	41	47	88
Parry Sound District									
Peel									
Perth	10	8	18	2		2	52	43	95
Peterborough									
Prescott									
Prince Edward									
Rainy River District							1		1
Renfrew									
Russell									
Simcoe									
Stormont									
Sudbury									
Temiskaming									
Thunder Bay District									
Victoria									
Waterloo									
Welland									
Wellington		1	1				1		1
Wentworth							2	1	3
York							2	3	5
Unascertained		14	14				14	16	30
Other Provinces	1	4	5		2	2	1	3	4
Totals	130	150	280	16	8	25	584	613	1,197

TABLE No. 6.—LONDON.

Showing the assigned causes of Insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.	6	5	11	2	1	3	
Mental Strain, Worry and Overwork (not included in above)	25	44	69	10	14	24	
Religious Excitement	1	2	3				
Love Affairs, including seduction		2	2		1	1	
Fright and Nervous Shock	5	4	9	1		1	
PHYSICAL.							
Alcoholism	5		5	1		1	
Sexual Excess							
Venereal Diseases	6		6	1		1	
Masturbatino	1		1	1		1	
Insolation	1		1	1		1	
Accident or Injury		3	3				
Pregnancy		2	2		1	1	
Parturition and Puerperium		6	6		1	1	
Lactation							
Climacteric Period		5	5				
Fevers							
Privation and Overwork							
Epilepsy		1	1				
Other Convulsive Diseases							
Diseases of Brain and Skull							
Senility	7	11	18	2	3	5	
Exophthalmic Goitre							
Epidemic Influenza	9	3	12	5	1	6	
Abuse of Drugs	2	1	3	1		1	
Loss of Special Sense							
Uraemia							
Other Auto-infection		3	3				
Other Bodily Diseases	4	5	9	1	3	4	
HEREDITARY.							
Congenital Defect	2	2	4				
Unascertained	56	49	105	13	12	25	
Not Insane		2	2				
Totals	130	150	280	39	37	76	

TABLE No. 7.—LONDON.

Showing hereditary tendency to Insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	6	9	15
Maternal Branch	7	8	15
Paternal and Maternal Branches	2	1	3
Collateral Branches	34	22	56
No Hereditary Tendency	45	68	113
Unascertained	36	42	78
Totals	130	150	280

TABLE No. 8.—LONDON.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	54	87	141
Discharged, Recovered while on Probation	20	18	38
" Improved	15	20	35
" Unimproved	3	4	7
Died	1	.....	1
Returned to Hospital	12	24	36
Absent on Probation, October 31st, 1921	3	21	24

TABLE No. 9.—LONDON.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever	7	5	12
Influenza			
Cerebro-spinal Meningitis		1	1
Diphtheria			
Erysipelas			
Septicæmia		1	1
Dysentery		1	1
Syphilis	1		1
Tuberculosis		2	2
Pellagra		1	1
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans		1	1
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas	1	2	3
" " Peritoneum	1	2	3
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi		4	4
" " Lungs	15	11	26
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	6	5	11
Arterio-sclerosis	1		1
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia	1		1
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges		1	1
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	7	6	13
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy	1		1
Totals—*Carried Forward*	41	43	84

TABLE No. 9.—LONDON—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	41	43	84
Mental Diseases:—			
Exhaustion of Acute Mental Disease		3	3
Exhaustion of Chronic Mental Disease	5	10	15
General Paresis	6	1	7
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age	5	7	12
Accident			
Suicide	1		1
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer			
Totals	58	64	122

TABLE No. 10.—LONDON.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium		1	1						
(c) Post Infection Psychoses		1	1					1	1
Exhaustion Psychoses:—									
(a) Collapsed Delirium		2	2					1	1
(b) Acute Confusional Psychoses					2	2			
(c) Neurasthenia	4	4	8	3	3	6			
Intoxication Psychoses:—									
(a) Acute Intoxications	2		2						
(b) Chronic				2		2	1		1
(a) Alcoholism (acute and chronic)									
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis	1		1						
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoid									
(g) " Paresis									
(h) Morphinism	1		1						
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	20	19	39	9	2	11	2	4	6
(b) Catatonic	24	31	55	29	14	43	12	25	37
(c) Paranoid	4	18	22	4	2	6	1	1	2
General Paresis	10		10	4		4	6	1	7
Organic Dementias:—									
(a) Cerebral Sclerosis	2		2						
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis	1		1						
(d) Cerebral Syphilis							1		1
(e) Tabetic Psychoses	1		1				1		1
(f) Arterio Sclerotic Psychoses	1	5	6		2	2			
(g) Cerebral Tumour, Abscess, Hæmorrhage				1		1	1		1
Involution Psychoses:—									
(a) Melancholia	4	11	15	2	8	10	3	4	7
(b) Pre-senile Delusional Psychoses	10	5	15	1	1	2		2	2
(c) Senile Dementia	18	22	40	2	5	7	19	14	33
Manic Depressive Psychoses:—									
(a) Manic States	5	7	12	3	7	10			
(b) Depressed States	9	15	24	6	12	18	4	4	8
(c) Mixed States					3	3			
Paranoia									
Totals—*Carried Forward*	117	141	258	66	61	127	51	57	108

TABLE No. 10.—LONDON—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	117	141	258	66	61	127	51	57	108
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	4	2	6	1	2	3	3	1	4
(b) Hysterical Psychoses									
(c) Sexualis Psychopathia									
States of Deficient Mental Development:—									
(a) Imbecility	2	4	6	2	2	4	2	3	5
(b) Idiocy									
Not Diagnosed	6	2	8	1	1	2	2	3	5
Not Insane	1	1	2	1	1	2			
Totals	130	150	280	71	67	138	58	64	122

TABLE No. 11.—LONDON.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	32	21	6	3	2	13
From 1 to 2 months	19	18	2	2	2	5
" 2 " 3 "	22	31	5		2	3
" 3 " 4 "	32	18	4	4		6
" 4 " 5 "	4	29	7	6		5
" 5 " 6 "	16	6	3	4		3
" 6 " 9 "	17	39	10	12		8
" 9 " 12 "	20	39	6	10	1	5
" 12 " 18 "	18	71	4	2	3	7
" 18 months to 2 years	7	31	5	7		3
" 2 to 3 years	35	51	3	6	2	8
" 3 " 4 "	12	50	1	3		5
" 4 " 5 "	11	50		4		3
" 5 " 10 "	17	202	1	1		13
" 10 " 15 "	7	150	1	1		9
" 15 " 20 "	3	111				4
" 20 years and upwards	8	282				21
Totals	280	1,199	58	66	14	121

THE ONTARIO HOSPITAL, MIMICO.

January 23rd, 1922.

W. W. Dunlop, Esq.,
Inspector of Ontario Hospitals,
Parliament Bldgs., Toronto, Ont.

Sir:—

I have the honour to hand you herewith the Twenty-seventh Annual Report of this hospital for the year ending October 31st, 1921.

I have the honour to be, Sir,

Your obedient servant,

N. H. Beemer,
Medical Superintendent.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	300	300	600			
There were in residence on October 31st, 1920				311	308	619
Admitted during year by Warrant	28	14	42			
Admitted during year by Certificate	35	38	73			
Voluntary Admissions						
Total admitted during year				63	52	115
Total number under treatment during the year				374	360	734
Discharged during year as recovered	13	14	27			
Discharged during year as improved	9	7	16			
Discharged during year as unimproved	1	2	3			
Discharged during year as not insane						
Total number discharged during the year	23	23	46			
Number died during the year	28	15	43			
Number eloped during the year	2		2			
Number transferred during the year	18	16	34			
Number deported during the year	1		1			
Total number leaving Hospital during the year				72	54	124
Total number remaining in Hospital on October 31st, 1921				302	306	608

Re-wiring Carpenter Shop and Stables.

During the past year the electrician was able to complete the conduit system in the last two of all the buildings at this hospital, and now that the carpenter shop and the stables have been included in the general conduit system there will be no further fire hazard from uncovered electric wires.

Compensator at Pumping Station.

Formerly the fire pump at the pumping station was equipped with an automatic compensator, but unfortunately on account of the excessive dampness due to the situation of the pump house this compensator was frequently out of commission, and it became necessary to replace it with a hand control machine. This change in compensators naturally called for the re-wiring of the switch-board which was done by the electrician.

Nurse Rescues Suicidal Patient.

On October 14th last past, a woman patient suffering from manic depressive of the depressed type with strongly suicidal impulses was out of the cottage with a small walking party for the advantage which the exercise and fresh air would contribute, and while the walking party was near the lake she suddenly bolted and ran into the water with the evident intention of drowning herself. One of the nurses in charge of the party, Miss Rachael Lake, at once followed her and overtook the patient in comparatively shallow water, and there a severe struggle ensued between the patient and the nurse in the course of which the nurse's leg was broken just below the knee. Notwithstanding her exhaustion from the struggle and the intense pain from the fracture, and her incapability of keeping upon her feet, she retained her hold upon the patient at the imminent risk of her own life by drowning and she managed in her disabled condition to keep the patient above water until further help arrived in the persons of two fellow patients.

It was clearly the duty under the circumstances for the nurse to follow the patient into the water and to try to rescue her, but when she was exhausted by the struggle and had been incapacitated by a broken leg it required a high sense of devotion to duty and an exalted estimate of her conception of ideal service to continue to protect the patient's life regardless of the danger to her own. If to do a common duty uncommonly well constitutes a high ideal of human performance, this nurse in doing an uncommon duty uncommonly well has reached a still higher plane of achievement. It would seem only right to acknowledge and reward in a special way such service not only for its own sake but also that its recognition shall be an encouragement in future for zealous servants to forget every selfish consideration on occasions of stress and danger and remember only the safety and protection of their patients.

Association Meeting.

On September 16th last the Ontario Neuro-Psychiatric Association held its autumn meeting in the Assembly Hall at this hospital where nearly a hundred physicians from this hospital district and from the City of Toronto and from the various Ontario Hospitals throughout the Province assembled for the discussion of questions relating principally to nervous and mental diseases. Dr. Edward Ryan, of the Ontario Hospital at Kingston, presided at the meeting, and besides a number of philanthropic laymen interested in hospital problems there were present the Attorney-General, the Hon. W. E. Raney, and the Provincial Secretary, the Hon. H. C. Nixon, both of whom contributed much to the interest of the meeting by introducing the discussions on two of the leading papers. It was the first occasion since the association was organized on which two members of the Ontario Cabinet had demonstrated by their personal presence and by participation in the proceedings the generous and abiding interest which the

Ontario Government has always shown in so many substantial ways in the class of sufferers cared for in the Ontario Hospitals, and the members of the medical profession who were present appreciated very highly this proof of their personal sympathy and support.

Mr. Rigby's Social Service Work.

During the past year this hospital has been more indebted than ever before to the philanthropic services of many of the immediate neighbours. The band of New Toronto has given frequent concerts, sometimes on the lawn in front of the cottages and sometimes in the Assembly Hall for the benefit of the patients, and many of the members of the band and other musical friends have often contributed to their entertainment. Very often on Sunday afternoons Mr. Richard Rigby has taken little bands of entertainers into the cottages and they have rendered very attractive programmes and have encouraged any of the patients who were capable of assisting to take part in these delightful Sunday afternoon concerts. The management and the patients as well gratefully acknowledge their debt of gratitude to Mr. Rigby and his friends for their enthusiastic interest in the hospital work and their generous contributions in promoting it.

Farm.

The crops at the farm during the past year have been fairly satisfactory and while the quality of the various products has been excellent, the total in quantity has only been a fair average. The production of milk for the use of the patients was large, amounting to over one hundred and twenty-three tons, and twelve tons of fresh pork were raised at the piggery. While the fruit crop was small the vegetable crop was large and of great value as food and fodder. The yield of hay was sufficient for the institution's use and the growth of corn for ensilage has never been better. The mixed grain crops of barley and oats were not quite equal to those of last year owing to weather conditions. Considered altogether the farming operations under the direction of the farmer were highly satisfactory.

Garden.

Even if the garden was not producing a dollar's worth of fruit and vegetables it would still be a very valuable section of the hospital property, because it affords during the summer time an easily available sphere of helpful activity to so many men and women. In addition, however, to the benefit which the garden work confers upon so many, there is a very large utilitarian outcome of their application in the form of fruit and vegetables for their daily use. Every year the gardener manages to provide all the vegetables required for the whole population of the hospital, and with the assistance coming from the farm nearly all the small fruits as well. The apple crop has never been equal to the needs of the patients, but this is somewhat due to the mistaken view of a former farm director that the soil and climate at this place are unfavourable to the growth of apples. Arrangements have now been made for the planting of additional apple trees, so that in future years this want of provision for raising this wholesome variety of fruit will no longer exist.

Officers and Employees.

During the past year there have been less frequent and less numerous changes on the staff of employees than for several preceeding years. Eighty-

three new servants were engaged to fill the vacancies of those who for various reasons were leaving the hospital, and of this number of new employees forty-seven terminated their services before the expiration of the official year. Of the total number employed, fifty-three were men and thirty were women.

Fortunately there have been no changes among the medical officers as both Dr. McClenahan and Dr. Moyle have now been resident long enough at this hospital to personally know all their patients under their immediate supervision and many of these patients understand the value and appreciate the privilege of the friendship of these officers and their qualifications to minister to their own needs and comforts as no comparative stranger could do.

Gratefully acknowledging your generous consideration and helpful counsel during the past year.

I have the honour to be, Sir,

Your obedient servant,

N. H. Beemer,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, MIMICO.

For the Year Ending October 31st, 1921.

TABLE No. 1.—MIMICO.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	300	300	600			
In Residence, October 31st, 1921				311	308	619
Admitted during year 1920-21:—						
By Warrant	28	14	42			
By Medical Certificate	35	38	73	63	52	115
Total number under treatment during year 1920-1921				374	360	734
Discharged during year:—						
As recovered	13	14	27			
As improved	9	7	16			
As unimproved	1	2	3			
As not insane						
Total number discharged during year	23	23	46			
Died	28	15	43			
Deported	1		1			
Eloped	2		2			
Transferred	18	16	34	72	54	126
Remaining in Hospital, October 31st, 1921				302	306	608
Total number admitted since opening of Hospital				2,292	2,053	4,345
Total number discharged since opening of Hospital	799	719	1,518			
Total number died since opening of Hospital	711	582	1,293			
Total number deported since opening of Hospital	55	11	66			
Total number eloped since opening of Hospital	60	1	61			
Total number transferred since opening of Hospital	365	434	799	1,990	1,747	3,737
Total remaining in Hospital, October 31st, 1921				302	306	608
Daily average population	307.07	306.82	613.89			
Collective days' stay of all patients in residence during year	112,081	111,990	224,071			
Number of applications on fyle	19	15	34			

TABLE No. 2.—MIMICO.

Showing social state and religion of patients admitted during the year.

	Admissions of Year.			In Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	34	14	48	204	126	330
Married	20	32	52	83	151	234
Widowed	8	5	13	15	28	43
Divorced	1	1	2	.....	1	1
Separated	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....
Totals	63	52	115	302	306	608
RELIGION.						
Baptists	2	1	3	6	12	18
Congregationalists	.....	.....	.....	1	1	2
Church of England	15	11	26	69	63	132
Methodists	7	12	19	55	85	140
Presbyterians	9	10	19	71	58	129
Roman Catholics	23	14	37	75	66	141
Other Denominations	3	3	6	15	13	28
Unascertained	4	1	5	10	8	18
Totals	63	52	115	302	306	608

TABLE No. 3.—MIMICO.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	63	52	115
Total born in Canada	42	41	83
Armenia			
Assyria			
Austria	3		3
Australia			
Belgium			
Bulgaria	1		1
Central America			
China			
Denmark			
England	6	3	9
France			
Finland	3	1	4
Galicia			
Germany			
Greece			
Holland			
Hungary			
Ireland	2	1	3
Italy	2	1	3
Japan			
Macedonia			
Other British Possessions			
Norway			
Roumania			
Russia	2	1	3
Scotland	1	3	4
South America			
Spain			
Sweden			
Turkey			
United States		1	1
West Indies	1		1
Unascertained			
Totals	63	52	115

TABLE No. 4.—MIMICO.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	.....	.....	.....
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	2	1	3
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	21	.....	21
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	11	.....	11
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositiors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	2	3	5
Domestic Service:— Waiters, Cooks, Servants, etc.	1	2	3
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	1	39	40
Miners, Marine Engineers, Railway Employees, Seamen, etc.	4	.....	4
Labourers	20	.....	20
No Occupation	1	7	8
Unascertained	.....	.....	.....
Totals	63	52	115

TABLE No. 5.—MIMICO.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	4	4	8	3	1	4	16	14	30
Brant								1	1
Bruce									
Carleton							1		1
Dufferin							1		1
Dundas								2	2
Durham							3	2	5
Elgin									
Essex									
Frontenac									
Glengarry									
Grenville									
Grey							2	6	8
Haldimand							1		1
Haliburton	2		2	2		2	3	1	4
Halton								1	1
Hastings								1	1
Huron									
Kenora							1	2	3
Kent							1		1
Lambton									
Lanark									
Leeds									
Lennox and Addington									
Lincoln									
Manitoulin	1		1	1		1	1	5	6
Middlesex							1		1
Muskoka District	1	1	2				5	5	10
Nipissing District	4	4	8	1	3	4	21	17	38
Norfolk									
Northumberland							2		2
Ontario	4	6	10	2	1	3	20	25	45
Oxford							1		1
Parry Sound District	3	4	7	1		1	15	15	30
Peel	3	3	6				20	21	41
Perth							2		2
Peterborough	2	1	3	1	1	2	17	31	48
Prescott									
Prince Edward								1	1
Rainy River District		2	2		2	2	5	7	12
Renfrew									
Russell									
Simcoe	18	9	27	2		2	49	39	88
Stormont									
Sudbury	2	2	4	2	1	3	5	6	11
Temiskaming	7	4	11	6	1	7	15	13	28
Thunder Bay District	4	5	9	4	2	6	11	8	19
Victoria	4	2	6	3	1	4	31	27	58
Waterloo							1		1
Welland							1		1
Wellington								1	1
Wentworth	1		1				1	2	3
York	2	5	7		1	1	46	55	101
Unascertained									
Other Provinces	1		1				1		1
Totals	63	52	115	28	14	42	302	306	608

TABLE No. 6.—MIMICO.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	10	5	15	3	4	7	8
Mental Strain, Worry and Overwork (not included in above)	6	4	10	1	1	2	8
Religious Excitement		1	1				1
Love Affairs, including seduction		1	1		1	1	
Fright and Nervous Shock	1	3	4		2	2	2
PHYSICAL.							
Alcoholism							
Sexual Excess							
Venereal Diseases							
Masturbation							
Insolation	2		2				2
Accident or Injury	2	1	3		1	1	2
Pregnancy		1	1		1	1	
Parturition and Puerperium							
Lactation							
Climacteric Period		1	1				1
Fevers							
Privation and Overwork							
Epilepsy	1	1	2		1	1	1
Other Convulsive Diseases							
Diseases of Brain and Skull							
Senility	2	1	3	1	1	2	1
Exophthalmic Goitre							
Epidemic Influenza		2	2		1	1	1
Abuse of Drugs		1	1				1
Loss of Special Sense							
Uræmia							
Other Auto-infection							
Other Bodily Diseases		3	3		2	2	1
HEREDITARY.							
Congenital Defect	1		1	1		1	
Unascertained	38	27	65	9	7	16	49
Not Insane							
Totals	63	52	115	15	22	37	78

TABLE No. 7.—MIMICO.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	1	6	7
Maternal Branch	6	8	14
Paternal and Maternal Branches	6	2	8
Collateral Branches	2	1	3
No Hereditary Tendency	16	22	38
Unascertained	32	13	45
Totals	63	52	115

TABLE No. 8.—MIMICO.

Showing summary of Probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	25	20	45
Discharged, Recovered While on Probation	8	7	15
" Improved	2	2	4
" Unimproved	1	1	2
Died	1	.....	1
Returned to Hospital	8	4	12
Absent on Probation, October 31st, 1921	5	6	11

TABLE No. 9.—MIMICO.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis	3	3	6
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Stomach			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum	1	1	2
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi	9	2	11
" " Lungs	1	1	2
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	4	4	8
Arterio-sclerosis	1	3	4
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried forward*	19	14	33

TABLE No. 9.—MIMICO—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought forward*	19	14	33
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	4	1	5
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy	1		1
Mental Diseases:—			
Exhaustion of Acute Mental Disease	2		2
Exhaustion of Chronic Mental Disease			
General Paresis	2		2
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age			
Accident			
Suicide			
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer			
Totals	28	15	43

TABLE No. 10.—MIMICO.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses	1		1						
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)	1		1						
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism		1	1						
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	6	2	8	1	1	2			
(b) Catatonic	2	7	9	1		1	1	1	2
(c) Paranoid	13	11	24	3	2	5	3	3	6
General Paresis	1	1	2				3		3
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses							2		2
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia	2	3	5		2	2	1		1
(b) Pre-senile Delusional Psychoses									
(c) Senile Dementia	9	3	12	2		2	6	3	9
Manic Depressive Psychoses:—									
(a) Manic States	8	7	15	7	7	14	6		6
(b) Depressed States	14	11	25	7	8	15	2	1	3
(c) Mixed States				1		1		1	1
Paranoia		1	1	1		1	1		1
Totals—*Carried forward*	57	47	104	23	20	43	25	9	34

TABLE No. 10.—MIMICO—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought forward*	57	47	104	23	20	43	25	9	34
Psychoses from Constitutional Neurosis:—									
(a) Epileptic Psychoses	2	1	3	....	1	1	1	3	4
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	4	4	8	....	....	....	2	1	3
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	....	....	....	....	2	2	....	2	2
Not Insane	....	....	....	....	....	....	....	....	....
Totals	63	52	115	23	23	46	28	15	43

TABLE No. 11.—MIMICO.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	16	12	....	....	....	1
From 1 to 2 months	8	16	....	....	....	3
" 2 " 3 "	7	14	2	....	....	....
" 3 " 4 "	6	9	2	....	....	3
" 4 " 5 "	2	7	1	2	....	....
" 5 " 6 "	7	9	2	1	....	1
" 6 " 9 "	6	15	6	3	1	5
" 9 " 12 "	3	11	4	1	1	....
" 12 " 18 "	4	47	4	4	....	3
" 18 months to 2 years	1	26	....	1	1	3
" 2 to 3 years	9	35	2	....	....	5
" 3 " 4 "	9	33	1	1	....	2
" 4 " 5 "	4	35	....	....	....	2
" 5 " 10 "	16	106	....	1	....	6
" 10 " 15 "	7	91	2	2	....	3
" 15 " 20 "	6	61	....	....	....	1
" 20 years and upwards	4	81	1	....	....	5
Totals	115	608	27	16	3	43

THE ONTARIO HOSPITAL, PENETANGUISHENE.

November 1st, 1921.

ANNUAL REPORT OF THE MEDICAL SUPERINTENDENT.

For the Year Ending October 31st, 1921.

W. W. Dunlop, Esq.,
Inspector of Ontario Hospitals,
Parliament Bldgs., Toronto, Ont.

Sir:—

In accordance with statutory requirements I have the honour to submit the Eighteenth Annual Report of The Ontario Hospital, Penetanguishene, for the year ending October 31st, 1921.

Population.

At the beginning of the year there were 158 male and 196 female patients in residence during the year; seven men and six women died; one man was written off as eloped; two men were discharged; four women were transferred to Mimico, and 17 men and 16 women were received, transfers from Mimico, leaving in residence at the end of the year 165 men and 202 women.

Work Done.

No new work was started this year. Work on laundry was halted in January but renewed in October and if no further interruption occurs should be ready for occupation early next year. The slate roof was overhauled in November.

Requirements.

The requirements as enumerated last year are still unfilled, but it has become an absolute necessity that something be done to our kitchen if we are to carry on at all.

Health of Community.

The general health of our people has been good. There was no epidemic diseases among the patients but we had two cases of smallpox in an employees' residence.

Staff.

There was but one change in the official staff. Dr. McBride, temporary physician from December 1st, 1917, left February 1st, 1921, and his place has not been filled. The chief engineer went out of the service September 30th, and since that time the assistant engineer has been efficiently carrying on the work.

I have again to thank officers, artisans, nurses, attendants, farm and other employees, for their loyal support and you, Sir, for your counsel.

I have the honour to be, Sir,
Your obedient servant,

W. S. Wilson,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, PENETANGUISHENE.

For the Year Ending October 31st, 1921.

TABLE No. 1.—PENETANGUISHENE.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	166	203	369			
In residence, October 31st, 1921				158	196	354
Admitted during year 1921:—						
By Warrant	15	9	24			
By Medical Certificate	2	6	8			
Voluntary		1	1	17	16	33
Total number under treatment during year				175	212	387
Discharges during year:—						
As recovered						
As improved						
As unimproved	2		2			
As not insane						
Total number discharged during year	2		2			
Died	7	6	13			
Deported						
Eloped	1		1			
Transferred		4	4	10	10	20
Remaining in Hospital, October 31st, 1921	10	10	20	165	202	367
Total number admitted since opening of Hospital				362	430	792
Total number discharged since opening of Hospital	21	22	43			
Total number died since opening of Hospital	138	173	311			
Total number deported since opening of Hospital	10	1	11			
Total number eloped since opening of Hospital	16	2	18			
Total number transferred since opening of Hospital	12	30	42	197	228	425
Total remaining in Hospital October 31st, 1921	197	228	425	165	202	367
Daily average population	163.91	194.25	358.16			
Collective days' stay of all patients in residence during year	56,538	70,481	127,019			
Number of applications on file						

TABLE No. 2.—PENETANGUISHENE.

Showing social state and religion of patients admitted during the year.

	Admissions of Year.			In Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	10	3	13	138	129	267
Married	4	13	17	32	80	112
Widowed				2	3	5
Divorced						
Separated						
Unascertained	3		3	3		3
Totals	17	16	33	175	212	387
RELIGION.						
Baptists	2		2	7	13	20
Congregationalists						
Episcopalians				18	48	66
Methodists	1	3	4	19	51	70
Presbyterians	1	2	3	18	18	36
Roman Catholics	8	6	14	67	60	127
Other Denominations	4	5	9	22	18	40
Unascertained	1		1	15	13	28
Totals	17	16	33	166	221	387

TABLE No. 3.—PENETANGUISHENE.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	17	16	33
Total born in Canada	7	10	17
Armenia			
Assyria			
Austria		2	2
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark	1		1
England		2	2
France	1		1
Finland	1	1	2
Galicia			
Germany			
Greece			
Holland			
Hungary			
Ireland	2	1	3
Italy	2		2
Japan			
Macedonia			
Other British Possessions			
Norway	1		1
Roumania			
Russia	2		2
Scotland			
South America			
Spain			
Sweden			
Turkey			
United States			
West Indies			
Unascertained			
Totals	17	16	33

TABLE No. 4.—PENETANGUISHENE.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	.....	.....	.....
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	.....	.....	.....
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	3	.....	3
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	3	.....	3
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	1	1	2
Domestic Service:— Waiters, Cooks, Servants, etc.	.....	1	1
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	.....	14	14
Miners, Marine Engineers, Railway Employees, Seamen, etc.	.....	.....	.....
Labourers	8	.....	8
No Occupation	1	.....	1
Unascertained	1	.....	1
Totals	17	16	33

TABLE No. 5.—PENETANGUISHENE.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	2	2	4	1	2	3	17	9	26
Brant							1	1	2
Bruce							1	3	4
Carleton							1	2	3
Dufferin							1	2	3
Dundas									
Durham									
Elgin								2	2
Essex									
Frontenac								3	3
Glengarry									
Grenville							5	3	8
Grey							1		1
Haldimand									
Haliburton									
Halton									
Hastings	1		1	1		1	2	2	4
Huron								2	2
Kenora									
Kent									
Lambton								1	1
Lanark								1	1
Leeds									
Lennox and Addington								2	2
Lincoln									
Manitoulin									
Middlesex							1	1	2
Muskoka District		1	1				8	7	15
Nipissing District	1		1				9	12	21
Norfolk								2	2
Northumberland							2	4	6
Ontario	1		1	2		2	8	10	18
Oxford							1	1	2
Parry Sound District	1	4	5	1	1	2	5	5	10
Peel								3	3
Perth									
Peterborough				1		1	3	4	7
Prescott							2		2
Prince Edward									
Rainy River District		1	1		1	1	4	3	7
Renfrew								3	3
Russell									
Simcoe	1	3	4	1		1	26	33	59
Stormont					1	1		1	1
Sudbury	1	1	2	1	1	2		1	1
Temiskaming	2		2	2		2	13	2	15
Thunder Bay District	1	2	3	1	2	3		1	1
Victoria							2	8	10
Waterloo								1	1
Welland								1	1
Wellington							2	2	4
Wentworth							5	2	7
York	2	2	4		1	1	30	58	88
Unascertained	4		4	4		4	15	4	19
Other Provinces									
Totals	17	16	33	15	9	24	165	202	367

TABLE No. 6.—PENETANGUISHENE.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	1	1	2				
Mental Strain, Worry and Overwork (not included in above)	1	2	3				
Religious Excitement		1	1				
Love Affairs, including seduction							
Fright and Nervous Shock							
PHYSICAL.							
Alcoholism	2	2	4				
Sexual Excess							
Venereal Diseases							
Masturbation							
Insolation							
Accident or Injury	1	1	2				
Pregnancy							
Parturition and Puerperium		2	2				
Lactation							
Climacteric Period							
Fevers							
Privation and Overwork							
Epilepsy							
Other Convulsive Diseases							
Diseases of Brain and Skull							
Senility							
Exophthalmic Goitre							
Epidemic Influenza							
Abuse of Drugs		1	1				
Loss of Special Sense							
Uræmia							
Other Auto-infection							
Other Bodily Diseases							
HEREDITARY.							
Congenital Defect	1	1	2				
Unascertained	11	5	16				
Not Insane							
Totals	17	16	33				

TABLE No. 7.—PENETANGUISHENE.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch		1	1
Maternal Branch			
Paternal and Maternal Branches			
Collateral Branches			
No Hereditary Tendency	5	13	18
Unascertained	12	2	14
Totals	17	16	33

TABLE No. 8.—PENETANGUISHENE.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge			
Discharged, Recovered While on Probation			
" Improved	1		1
" Unimproved			
Died			
Returned to Hospital		1	1
Absent on Probation, October 31st, 1921			

TABLE No. 9.—PENETANGUISHENE.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis	2	1	3
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi			
" " Lungs			
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	1	2	3
Arterio-sclerosis	1		1
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System	1	2	3
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried forward*	5	5	10

TABLE No. 9.—PENETANGUISHENE—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Carried forward*	5	5	10
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	2	1	3
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy			
Mental Diseases:—			
Exhaustion of Acute Mental Disease			
Exhaustion of Chronic Mental Disease			
General Paresis			
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age			
Accident			
Suicide			
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer			
Unascertained			
Totals	7	6	13

TABLE No. 10.—PENETANGUISHENE.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses		1	1					1	1
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses									
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)									
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism									
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	4	1	5						
(b) Catatonic		4	4						
(c) Paranoid	9	5	14	1		1	1	2	3
General Paresis									
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses									
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia									
(b) Pre-senile Delusional Psychoses								1	1
(c) Senile Dementia									
Manic Depressive Psychoses:—									
(a) Manic States	1		1				3	2	5
(b) Depressed States	3	3	6				2		2
(c) Mixed States				1		1			
Paranoia									
Totals—*Carried Forward*	17	14	31	2		2	6	6	12

TABLE No. 10.—PENETANGUISHENE—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	17	14	31	2	....	2	6	6	12
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	....	....	....	....	....	....	....	....	....
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychpoathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	....	2	2	....	....	....	1	....	1
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	....	....	....	....	....	....	....	....	....
Not Insane	....	....	....	....	....	....	....	....	....
Totals	17	16	33	2	....	2	7	6	13

TABLE No. 11.—PENETANGUISHENE.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were transferred during the year.	Periods of treatment of those who were discharge improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	.....	.....	.....	.....	.....	.....
From 1 to 2 months	.....	.....	.....	.....	.....	.....
" 2 " 3 "	.....	.....	.....	.....	.....	.....
" 3 " 4 "	.....	.....	.....	.....	.....	.....
" 4 " 5 "	.....	.....	.....	.....	.....	.....
" 5 " 6 "	.....	.....	.....	.....	.....	.....
" 6 " 9 "	.....	.....	.....	.....	.....	.....
" 9 " 12 "	.....	.....	.....	.....	.....	.....
" 12 " 18 "	13	13	.....	.....	.....	.....
" 18 months to 2 years	6	8	.....	.....	.....	.....
" 2 to 3 years	3	15	.....	.....	.....	.....
" 3 " 4 "	.....	14	.....	.....	.....	4
" 4 " 5 "	4	16	.....	.....	.....	.....
" 5 " 10 "	1	75	4	.....	2	1
" 10 " 15 "	3	22	.....	.....	1	.....
" 15 " 20 "	.....	7	.....	.....	.....	.....
" 20 years and upwards	3	197	.....	.....	.....	8
Totals	33	367	4	.....	3	13

HOSPITAL FOR THE INSANE, TORONTO.

November 22nd, 1921.

W. W. Dunlop, Esq.,
Inspector of Hospitals,
Parliament Bldgs., Toronto, Ont.

Sir:—

I am herewith sending you the Annual Statistical Report for the year 1921. Thanking you for your co-operation during the past year.

I have the honour to remain,

Your obedient servant,

Harvey Clare,
Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOSPITAL FOR THE INSANE, TORONTO.

For the Year Ending October 31st, 1921.

TABLE No. 1.—TORONTO.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital						
In residence, October 31st, 1920				251	330	581
Admitted during year 1921:—						
By Warrant	105	66	171			
By Medical Certificate	169	295	464	274	361	635
Total number under treatment during year				525	691	1,216
Discharges during year (minus deports)						
As recovered	36	51	87			
As improved	57	74	131			
As unimproved	4	5	9			
As not insane	1	2	3			
Total number discharged during year	98	132	230			
Died	54	62	116			
Deported	7	3	10			
Eloped	9	.....	9			
Transferred	96	12	108	264	209	473
Remaining in Hospital, October 31st, 1921				261	482	743
Total number admitted since opening of Hospital				7,723	7,620	15,343
Total number discharged since opening of Hospital	3,682	4,007	7,689			
Total number died since opening of Hospital	2,136	1,722	3,858			
Total numbee deported since opening of Hospital	133	57	190			
Total number eloped since opening of Hospital	193	35	228			
Total number transferred since opening of Hospital	1,318	1,317	2,635	7,462	7,138	14,600
Total remaining in Hospital, October 31st, 1921				261	482	743
Daily average population	232	378	610			
Collective days' stay of all patients in residence during year	84,680	137,970	222,650			
Number of applications on fyle	5	3	8			

TABLE No. 2.—TORONTO.

Showing social state and religion of patients admitted during the year.

	In Residence.			Admissions of Year.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	142	205	347	135	143	278
Married	107	208	315	125	170	295
Widowed	12	69	81	14	48	62
Divorced						
Separated						
Unascertained						
Totals	261	482	743	274	361	635
RELIGION.						
Baptists	6	13	19	15	14	29
Congregationalists	2	4	6	1	3	4
Episcopalians	57	117	174	42	83	125
Methodists	35	98	133	30	58	88
Presbyterians	39	76	115	37	61	98
Roman Catholics	38	83	121	55	70	125
Other Denominations	69	74	143	73	59	132
Unascertained	15	17	32	21	13	34
Totals	261	482	743	274	361	635

TABLE No. 3.—TORONTO.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	274	361	635
Total born in Canada	101	201	302
Armenia			
Assyria		1	1
Austria	6	1	7
Australia			
Belgium		2	2
Bulgaria			
Central America			
China	1		1
Denmark	1		1
England	59	67	126
France	1		1
Finland	3		3
Galicia			
Germany		9	9
Greece	2		2
Holland	2		2
Hungary	1		1
Ireland	19	26	45
Italy	5	2	7
Japan			
Macedonia	2	1	3
Other British Possessions	3	3	5
Norway			
Roumania			
Russia	20	6	26
Scotland	18	26	44
South America			
Spain			
Sweden			
Turkey			
United States	9	9	18
West Indies	1	1	2
Unascertained	21	6	27
Totals	274	361	635

TABLE No. 4.—TORONTO.

Showing the occupaiton of those admitted during the year.

Occupations.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	3	3	6
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc.	36	28	64
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc.	28	.....	28
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc.	29	.....	29
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc.	18	18	36
Domestic Service:— Waiters, Cooks, Servants, etc.	4	56	60
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc.	2	189	191
Miners, Marine Engineers, Railway Employees, Seamen, etc.	5	.....	5
Labourers	114	.....	114
No Occupation	35	67	102
Unascertained	.....	.....	.....
Totals	274	361	635

TABLE No. 5.—TORONTO.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	12	.....	12	9	.....	9	6	.....	6
Brant	1	4	5	.....	.....	.....	1	1	2
Bruce	.....	2	2	.....	1	1	.....	3	3
Carleton	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dufferin	.....	5	5	.....	3	3	.....	5	5
Dundas	.....	1	1	.....	.....	.....	.....	1	1
Durham	3	.....	3	.....	.....	.....	2	2	4
Elgin	.....	.....	.....	.....	.....	.....	.....	.....	.....
Essex	.....	.....	.....	.....	.....	.....	1	.....	1
Frontenac	.....	.....	.....	.....	.....	.....	.....	2	2
Glengarry	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grenville	.....	.....	.....	.....	.....	.....	1	.....	1
Grey	.....	13	13	.....	4	4	.....	10	10
Haldimand	.....	3	3	.....	.....	.....	.....	3	3
Haliburton	.....	.....	.....	.....	.....	.....	.....	.....	.....
Halton	.....	3	3	.....	1	1	.....	3	3
Hastings	.....	1	1	.....	.....	.....	1	1	2
Huron	.....	.....	.....	.....	.....	.....	2	1	3
Kenora	.....	2	2	.....	1	1	.....	2	2
Kent	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lambton	1	.....	1	.....	.....	.....	1	.....	1
Lanark	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leeds	.....	.....	.....	.....	.....	.....	1	.....	1
Lennox and Addington	.....	.....	.....	.....	.....	.....	1	.....	1
Lincoln	.....	3	3	.....	.....	.....	.....	3	3
Manitoulin	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middlesex	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muskoka District	1	.....	1	1	.....	1	1	.....	1
Nipissing District	6	6	12	6	4	10	1	4	5
Norfolk	.....	3	3	.....	2	2	.....	3	3
Northumberland	.....	.....	.....	.....	.....	.....	.....	2	2
Ontario	1	1	2	1	1	2	1	3	4
Oxford	.....	1	1	.....	1	1	1	.....	1
Parry Sound District	3	4	7	2	1	3	.....	4	4
Peel	.....	2	2	.....	.....	.....	.....	7	7
Perth	.....	2	2	.....	1	1	.....	2	2
Peterborough	3	.....	3	1	.....	1	3	.....	3
Prescott	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prince Edward	.....	.....	.....	.....	.....	.....	.....	1	1
Rainy River District	.....	.....	.....	.....	.....	.....	.....	.....	.....
Renfrew	.....	.....	.....	.....	.....	.....	1	.....	1
Russell	.....	.....	.....	.....	.....	.....	.....	.....	.....
Simcoe	2	3	5	.....	3	3	3	2	5
Stormont	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sudbury	3	.....	3	2	.....	2	2	.....	2
Temiskaming	4	3	7	3	.....	3	2	3	5
Thunder Bay District	1	1	2	1	3	4	1	1	2
Victoria	2	.....	2	2	.....	2	3	1	4
Waterloo	1	10	11	.....	5	5	1	10	11
Welland	.....	6	6	.....	1	1	.....	5	5
Wellington	.....	5	5	.....	.....	.....	.....	6	6
Wentworth	.....	25	25	.....	6	6	1	24	25
York	230	252	482	77	28	105	223	367	590
Unascertained	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Provinces	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	274	361	635	105	66	171	261	482	743

TABLE No. 6.—TORONTO.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Femle.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)							
Mental Strain, Worry and Overwork (not included in above)							
Religious Excitement							
Love Affairs, including seduction							
Fright and Nervous Shock							
PHYSICAL.							
Alcoholism	9	1	10				
Sexual Excess							
Venereal Diseases	28	5	33				
Masturbation							
Insolation							
Accident or Injury							
Pregnancy							
Parturition and Puerperium							
Lactation							
Climacteric Period							
Fevers							
Privation and Overwork							
Epilepsy	6	9	15				
Other Convulsive Diseases							
Diseases of Brain and Skull	182	272	454				
Senility	43	73	116				
Exophthalmic Goitre							
Epidemic Influenza							
Abuse of Drugs	6	1	7				
Loss of Special Sense							
Uræmia							
Other Auto-infection							
Other Bodily Diseases							
HEREDITARY.							
Congenital Defect				10	15	25	
Unascertained				262	344	606	
Not Insane				2	2	4	
Totals	274	361	635	274	361	635	

TABLE No. 7.—TORONTO.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	6	8	14
Maternal Branch	4	6	10
Paternal and Maternal Branches	.....	1	1
Collateral Branches	.....	.....	.....
No Hereditary Tendency	.....	.....	.....
Unascertained	264	346	610
Totals	274	361	635

TABLE No. 8.—TORONTO.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	117	172	289
Discharged, Recovered While on Probation	21	35	56
" Improved	39	48	87
" Unimproved	2	.....	2
Not Insane	.....	1	1
Died	.....	.....	.....
Returned to Hospital	36	49	85
Absent on Probation, October 31st, 1921	19	39	58

TABLE No. 9.—TORONTO.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas		1	1
Septicæmia		1	1
Dysentery			
Syphilis			
Tuberculosis	2	6	8
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi		1	1
" " Lungs	3	1	4
" " Pleura	5	4	9
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart		6	6
Arterio-sclerosis	2	3	5
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia	1		1
Pernicious Anæmia		1	1
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System		1	1
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried Forward*	13	25	38

TABLE No. 9.—TORONTO—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	13	25	38
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	3	2	5
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	.....	1	1
Epilepsy	2	1	3
Mental Diseases:—			
Exhaustion of Acute Mental Disease	10	9	19
Exhaustion of Chronic Mental Disease	.....	.....	.....
General Paresis	12	2	14
Pellgara	.....	.....	.....
Intoxications:—			
Alcoholism	.....	.....	.....
Morphinism	.....	.....	.....
Metallic Poisoning	.....	.....	.....
Heat Stroke	.....	.....	.....
Debility of Old Age	12	19	31
Accident	.....	.....	.....
Suicide	1	1	2
Surgical Diseases	.....	.....	.....
Gynæcological Diseases	.....	.....	.....
Malignant New Growths, or Cancer	.....	2	2
Unascertained	1	.....	1
Totals	54	62	116

TABLE No. 10.—TORONTO.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium	3	6	9	4	7	11			
(c) Post Infection Psychoses		4	4						
Exhaustion Psychoses:—									
(a) Collapsed Delirium	3	3	6		2	2	1	3	4
(b) Acute Confusional Psychoses	4	7	11	1	4	5	1	1	2
(c) Neurasthenia	2	3	5	1	3	4			
Intoxication Psychoses:—									
(a) Acute Intoxications	9	1	10	6		6			
(b) Chronic									
(a) Alcoholism (acute and chronic)				3	1	4			
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism	6	1	7	5	1	6			
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	37	63	100	18	20	38	4	7	11
(b) Catatonic	33	52	85	15	21	36	2	2	4
(c) Paranoid	37	50	87	9	12	21	2	4	6
General Paresis	28	5	33	1		1	13	2	15
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea								2	2
(c) Multiple Sclerosis	1		1						
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses	8	1	9	2	1	3	3	5	8
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia	6	9	15	3	8	11	1	3	4
(b) Pre-senile Delusional Psychoses	7	13	20	4	1	5	1	1	2
(c) Senile Dementia	36	60	96	5	10	15	20	25	45
Manic Depressive Psychoses:—									
(a) Manic States	19	28	47	14	20	34	2	2	4
(b) Depressed States	8	27	35	2	9	11			
(c) Mixed States									
Paranoia	1		1						
Totals—*Carried Forward*	248	333	581	93	120	213	50	57	107

TABLE No. 10.—TORONTO—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	248	333	581	93	120	213	50	57	107
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	6	9	15	2	2	4	3	1	4
(b) Hysterical Psychoses	....	1	1	....	2	2	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	17	16	33	8	9	17	....	3	3
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	1	....	1	1	....	1	1	....	1
Not Insane	2	2	4	1	2	3	....	....	....
Totals	274	361	635	105	135	*240	54	62	116

* Deports counted.

TABLE No. 11.—TORONTO.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1920.	Periods of treatment of those who were discharged recovered during the year.	Not Insane.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	19	59	10	1	10	8	31
From 1 to 2 months	14	35	7	2	2	.....	9
" 2 " 3 "	38	33	6	.....	6	.....	9
" 2 " 4 "	45	28	10	.....	10	.....	3
" 4 " 5 "	25	20	6	.....	6	.....	8
" 5 " 6 "	75	29	6	.....	16	.....	3
" 6 " 9 "	103	124	26	.....	50	.....	9
" 9 " 12 "	49	47	6	.....	12	.....	9
" 12 " 18 "	17	48	8	.....	11	1	8
" 18 months to 2 years	35	30	.....	.....	1	.....	2
" 2 to 3 years	36	26	.....	.....	1	.....	2
" 3 " 4 "	35	28	.....	.....	.....	.....	1
" 4 " 5 "	29	18	.....	.....	1	.....	2
" 5 " 10 "	72	87	1	.....	2	.....	9
" 10 " 15 "	15	42	1	.....	2	.....	2
" 15 " 20 "	21	31	.....	.....	.....	.....	.....
" 20 years and upwards	3	58	.....	.....	1	.....	9
Not Insane	4	.....	.....	.....	.....	.....	.....
Totals	635	743	87	3	131	9	116

Deports counted.

THE ONTARIO HOSPITAL, WHITBY.

November 19th, 1921.

W. W. Dunlop, Esq.,
Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

Sir:—

Re Annual Report.

As requested I herewith submit the Second Annual Report for the year ending October 31st, 1921.

During the present year there were 117 men and 51 women admitted to this hospital, making a total of 168. Out of this number there were received directly into this hospital 22 men and 42 women, making a total of 64. The remaining 104 admissions consisted of transfers from the Ontario Hospital, Toronto. The discharges were 15 men and 19 women, making a total of 34. These new cases were accommodated in the infirmaries which were not meant as reception hospitals but as hospitals for the physically ill and infirm from the various parts of the general population. The admission hospitals have not yet been built.

A special effort for treatment was directed to the more permanent residents from Toronto. Our cottages were designed as convalescent centres and places for treatment by occupation and diversions for this class of patients.

The medical, nursing and occupational staffs lent themselves with full energy to this task and with gratifying results. The occupational therapy rooms, under Miss Jessie D. Houston, a trained and experienced therapist, were opened on the ground floor of what was formerly known as Military Camp No. 2, divided into three rooms beautifully lighted and ventilated. Mostly every occupation that would appeal to the interests of one, who was practically without interest, was installed and the work was carried on here every day—in the forenoon by the men and in the afternoon by the women. In some cases the progress was slow, in others strikingly marked, so much so that they would go on to the industrial fields such as gardening, farming, carpenter shop, machine shop, etc., and in the women's department, mending room, laundry, sewing room, dining rooms, picking fruit in the garden, and the canning operations in the cannery.

In this way hundreds of our patients were pleasantly occupied every day, not only to the benefit of themselves, which was our first object, but also to the profit of the hospital. This was a beginning of a concerted and scientific effort on the part of the staff to, if possible, allay or ameliorate the progress of a dementing process so familiar and yet so regrettable to all medical observers. At any rate, it has resulted in a tremendous amount of freedom being conceded our patients.

These occupational rooms are supplied with looms, reed work, carpenter benches, etc. In fact this is made the centre of all kinds of pleasant diversions and occupations. Flower boxes and potted plants are grown inside, and a flower garden outside is cultivated in the summer. It is a happy place to visit always, and everything is done to create an interest in this work and a desire in the patient to return to it.

The probational nurses receive instruction in the various branches, not that they may become teachers but that they may appreciate the value of this as a therapeutic agent, and that they may be competent to lend a hand in helping their patients in the various convalescent cottages, and while at work with the patients in these cottages they may become better acquanted with the individual patient and understand his illness better, with the possibilities of relief. One nurse expressed the opinion that almost every patient could be induced to do something if only they could select the right occupation for each case. How truly she had spoken remains to be seen.

One of the men patients on the farm had been an indifferent worker until one day the head farmer was left with a team of horses standing while his man was away. He said to this patient, "Take these lines." The patient felt complimented and from that incident he has become one of the most capable teamsters on the premises. He loves his horses and he is proud of his position. Of course such a task requires a great many intelligent and trained workers. The number of patients actively engaged are 250 men and 260 women, making a total of 510.

Many of the articles made in the occupational therapy rooms are decorative as well as useful in the different buildings of the hospital. They give the cottages an appearance of comfort and homeliness.

In the industrial section of the hospital articles for women's wear were made to the extent of 2,652, and bedding to the extent of 1,968. In the mending room discarded clothing is cleaned and repaired and this one feature runs over 1,800 articles every month.

In the canning section we canned 6,309 gallons of vegetables and 2,450 gallons of fruits.

The Medical Laboratory.

The scientific, medical side was not overlooked and during the summer we had seven of the fifth-year medical students on our staff. These young men were very energetic and enthusiastic and helpful in our work. Under the direction of the medical officers they undertook different laboratory researches in the pathological rooms and carried on very valuable experiments. They assisted in case-taking, treatment and amusements of the patients. Besides this the young men acquired a practical knowledge of the examination and treatment of the various mental diseases, which will be of great value to them in their practice, and in their efforts to provide home-treatment for many mental cases. I am impressed with the great necessity for an all-year active service in this laboratory department under a special medical officer who would combine this with research work on cases where obscure medical problems were involved.

X-Ray.

The X-Ray room has been very helpful in both a medical and surgical sense, and the Assistant Superintendent has acquired a technical knowledge of this important work.

The Nurses' Training School.

The teaching in the training school for nurses has been actively carried on during the year. We have had many promising probationers enter the work. They have become enthusiastic and will ultimately occupy, I am sure, high positions in the nursing profession which will be of untold service to the patients in this hospital. There were five graduates in the class of 1921: Miss Lila Johnson, Miss Elsie Torrance, Miss Lucy Wert, Miss Ethel Coburn, and Miss

Laura Aide. The graduation exercises were made quite an occasion as this was the first graduating class in this hospital. The Hon. H. C. Nixon, Provincial Secretary, graced the occasion with his presence. Dr. T. W. G. McKay of Oshawa addressed the graduating class and Mrs. R. S. McLaughlin of Oshawa and Mrs. E. Turkington of Whitby presented the diplomas and pins to the graduates.

Distinguished Visitors.

During the year the hospital was honoured by visits from many prominent individuals and organizations who had heard about this Ontario hospital, and were anxious to have personal knowledge of it. Among these I might mention H. H. Holdsworth, Amberd, Wakefield, Yorkshire, England, President, Wakefield Chamber of Commerce; H. Holdroyd, Esq., Toronto; Dr. G. L. de Bellefeuille, St. Jean-de-Dieu Hospital for Insane, Montreal, Que.; Souer Amarine, Superieure, Hospital St. Jean-de-Dieu, Montreal, Que.; Dr. and Mrs. Charles T. Paul, College of Missions, China; Dr. J. H. Dunston, Commissioner, Pretoria, Transvaal, South Africa; Dr. F. E. Lawlor, Superintendent of Nova Scotia Hospital, Dartmouth, N.S.; Mr. and Mrs. W. P. Connell, Hospital Board of Jackson, Louisiana.

Acknowledgments.

We are greatly indebted to the following clergymen for providing services on Sunday: Rev. J. Pogson, T. G. A. Wright, E. Turkington, F. Howard and J. P. Priest. We also extend our hearty thanks to the Famous Players Films for their generous donation of a film a week for the pleasure of the patients.

As in the past, I am again indebted to yourselves, Gentlemen, for your always ready and valuable advice from time to time.

I have the honour to be, Gentlemen,

Your obedient servant,

J. M. Forster,
Medical Superintendent

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, WHITBY.

For the Year Ending October 31st, 1921.

TABLE No. 1.—WHITBY.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	550	460	1,010			
In Residence, October 31st, 1920	.....	.....	.....	417	450	867
Admitted during year 1921:—						
By Warrant	56	3	59			
By Medical Certificate	61	48	109	117	51	168
Total number under treatment during year	.....	.....	.....	534	501	1,035
Discharges during year:—						
As recovered	4	8	12			
As improved	9	8	17			
As unimproved	.....	1	1			
As not insane	2	2	4			
Total number discharged during year	15	19	34			
Died	9	11	20			
Deported	5	.....	5			
Eloped	9	1	10			
Transferred	.....	3	3	38	34	72
Remaining in Hospital, October 31st, 1921	.....	.....	.....	496	467	963
Total number admitted since opening of Hospital	.....	.....	.....	558	527	1,085
Total number discharged since opening of Hospital	25	37	62			
Total number died since opening of Hospital	16	18	34			
Total number deported since opening of Hospital	5	1	6			
Total number eloped since opening of Hospital	14	1	15			
Total number transferred since opening of Hospital	2	3	5	62	60	122
Total remaining in Hospital, October 31st, 1921	.....	.....	.....	496	467	963
Daily average population	457	447	904			
Collective days' stay of all patients in residence during year	166,805	163,155	329,960			
Number of applications on fyle	.....	1	1			

TABLE No. 2.—WHITBY.

Showing social state and religion of patients admitted during the year.

	In Residence.			Admissions of Year.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	348	254	602	69	23	92
Married	119	170	289	39	25	64
Widowed	19	42	61	5	3	8
Divorced	.....	.....	.....	.....	.....	.....
Separated	.....	1	1	.....	.....	.....
Unascertained	10	.....	10	4	.....	4
Totals	496	467	963	117	51	168
RELIGION.						
Baptists	10	21	31	2	4	6
Congregationalists	1	7	8	.....	1	1
Episcopalians	120	133	253	26	11	37
Methodists	82	92	174	14	13	27
Presbyterians	76	86	162	18	9	27
Roman Catholics	109	65	174	25	3	28
Other Denominations	68	37	105	24	5	29
Unascertained	30	26	56	8	5	13
Totals	496	467	963	117	51	168

TABLE No. 3.—WHITBY.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	117	51	168
Total born in Canada	49	33	82
Armenia			
Assyria			
Austria	3		3
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	31	11	42
France	1		1
Finland			
Galicia			
Germany			
Greece	1		1
Holland			
Hungary	2		2
Ireland	4	3	7
Italy	5		5
Japan			
Macedonia	1		1
Other British Possessions	1		1
Norway			
Roumania			
Russia	7		7
Scotland	7		7
South America			
Spain			
Sweden			
Turkey			
United States	1	3	4
West Indies			
Unascertained	4	1	5
Totals	117	51	168

TABLE No. 4.—WHITBY.

Showing the occupation of those admitted during the year.

	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.	4	1	5
Commercial:— Bankers, Merchants Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	4	3	7
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc	14	.....	14
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	6	.....	6
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	24	4	28
Domestic Service:— Waiters, Cooks, Servants, etc	4	3	7
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc	1	37	38
Miners, Marine Engineers, Railway Employees, Seamen, etc	3	.....	3
Labourers	53	.....	53
No Occupation	1	1	2
Unascertained	3	2	5
Totals	117	51	168

TABLE No. 5.—WHITBY.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District	5		5	4		4	11	1	12
Brant								1	1
Bruce								2	2
Carleton							2	2	4
Dufferin							1		1
Dundas									
Durham							6	5	11
Elgin									
Essex									
Frontenac		1	1					3	3
Glengarry							1		1
Grenville									
Grey							2	2	4
Haldimand	1		1				1		1
Haliburton									
Halton								1	1
Hastings	2	1	3				1	3	4
Huron		1	1				1	2	3
Kenora									
Kent									
Lambton								1	1
Lanark									
Leeds									
Lennox and Addington									
Lincoln								1	1
Manitoulin								2	2
Middlesex		1	1				3	1	4
Muskoka District							1	3	4
Nipissing District	2		2	2		2	4		4
Norfolk									
Northumberland	1		1				4	4	8
Ontario	7	7	14	1	2	3	15	14	29
Oxford							2		2
Parry Sound District							2	3	5
Peel								4	4
Perth									
Peterborough							4	10	14
Prescott									
Prince Edward								1	1
Rainy River District							2		2
Renfrew								1	1
Russell									
Simcoe	1	1	2	1		1	9	8	17
Stormont								1	1
Sudbury	1		1	1		1	1	4	5
Temiskaming	3	2	5	3		3	9	3	12
Thunder Bay District							5	5	10
Victoria	2	1	3	1		1	6	4	10
Waterloo							2	1	3
Welland							2	1	3
Wellington	1	1	2				3	4	7
Wentworth	2		2	1		1	2	3	5
York	89	35	124	42	1	43	389	361	750
Unascertained							1	3	4
Other Provinces							4	2	6
Totals	117	51	168	56	3	59	496	467	963

TABLE No. 6.—WHITBY.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)	9	10	19				
Mental Strain, Worry and Overwork (not included in above)	9	8	17				
Religious Excitement	1		1				
Love Affairs, including seduction		2	2				
Fright and Nervous Shock							
PHYSICAL.							
Alcoholism	5	1	6				
Sexual Excess							
Venereal Diseases	1		1				
Masturbation							
Insolation							
Accident of Injury	1	1	2				
Pregnancy							
Parturition and Puerperium		1	1				
Lactation							
Climacteric		2	2				
Fevers							
Privation and Overwork							
Epilepsy	4		4				
Other Convulsive Diseases							
Diseases of Brain and Skull							
Senility		1	1				
Exophthalmic Goitre							
Epidemic Influenza							
Abuse of Drugs	2		2				
Loss of Special Sense							
Uræmia							
Other Auto-infection							
Other Bodily Diseases	5	4	9				
HEREDITARY.							
Congenital Defect	1	1	2	9	18	27	
Unascertained	77	18	95	108	33	141	
Not Insane	2	2	4				
Totals	117	51	168	117	51	168	

TABLE No. 7.—WHITBY.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	5	6	11
Maternal Branch	2	10	12
Paternal and Maternal Branches			
Collateral Branches	2	2	4
No Hereditary Tendency			
Unascertained	108	33	141
Totals	117	51	168

TABLE No. 8.—WHITBY.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	11	15	26
Discharged, Recovered While on Probation	3	8	11
" Improved	8	7	15
" Unimproved			
Died			
Returned to Hospital	7	8	15
Absent on Probation, October 31st, 1921	6	8	14

TABLE No. 9.—WHITBY.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis	1	2	3
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi			
" " Lungs		4	4
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	1	2	3
Arterio-sclerosis	1		1
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia	1		1
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System:	1		1
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried Forward*	5	8	13

TABLE No. 9.—WHITBY—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought Forward*	5	8	13
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	1		1
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)	1		1
Epilepsy			
Mental Diseases:—			
Exhaustion of Acute Mental Disease	1		1
Exhaustion of Chronic Mental Disease			
General Paresis	1		1
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age			
Accident			
Suicide		2	2
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer		1	1
Unascertained			
Totals	9	11	20

TABLE No. 10.—WHITBY.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses	1	1	2				1		1
(c) Neurasthenia					1	1			
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)		1	1		1	1	1		1
(b) Delirium Tremens									
(c) Korsakow's Psychoses	1		1						
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism	1		1						
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic	15	9	24	2	4	6	1		1
(b) Catatonic	25	6	31	5	1	6	1	3	4
(c) Paranoid	31	11	42	1	2	3		2	2
General Paresis	3		3	1		1	1		1
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea		1	1						
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses	1		1						
(f) Arterio Sclerotic Psychoses	5		5				2		2
(g) Cerebral Tumor, Abscess, Hæmorrhage	1	1	2						
(h) Post Hemiplegic					1	1			
Involution Psychoses:—									
(a) Melancholia	2	3	5	1	1	2			
(b) Pre-senile Delusional Psychoses									
(c) Senile Dementia	7	4	11				1	1	2
Manic Depressive Psychoses:—									
(a) Manic States	2	3	5	1	4	5	1	3	4
(b) Depressed States	4	2	6	1	1	2			
(c) Mixed States		3	3						
Paranoia									
Totals—*Carried Forward*	99	45	144	12	16	28	9	9	18

TABLE No. 10.—WHITBY—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Diseases.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought Forward*	99	45	144	12	16	28	9	9	18
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses	5	....	5	1	....	1	....	....	....
(b) Hysterical Psychoses	....	....	....	....	....	....	....	....	....
(c) Sexualis Psychopathia	....	....	....	....	....	....	....	....	....
States of Deficient Mental Development:—									
(a) Imbecility	11	2	13	....	1	1	....	2	2
(b) Idiocy	....	....	....	....	....	....	....	....	....
Not Diagnosed	....	2	2	....	....	....	....	....	....
Not Insane	2	2	4	2	2	4	....	....	....
Totals	117	51	168	15	19	34	9	11	20

TABLE No. 11.—WHITBY.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month	10	7	.....	1	1	2
From 1 to 2 months	11	7	.....	1	.....	.....
" 2 " 3 "	10	52	1	.....	.....	.....
" 3 " 4 "	3	8	.....	.....	.....	.....
" 4 " 5 "	4	4	1	1	.....	1
" 5 " 6 "	5	7	.....	1	.....	1
" 6 " 9 "	14	4	1	4	.....	4
" 9 " 12 "	9	58	4	1	.....	4
" 12 " 18 "	12	136	3	4	.....	6
" 18 months to 2 years	9	680	2	4	.....	2
" 2 to 3 years	12	.....	.....	.....	.....	.....
" 3 " 4 "	14	.....	.....	.....	.....	.....
" 4 " 5 "	8	.....	.....	.....	.....	.....
" 5 " 10 "	20	.....	.....	.....	.....	.....
" 10 " 15 "	6	.....	.....	.....	.....	.....
" 15 " 20 "	7	.....	.....	.....	.....	.....
" 20 years and upwards	10	.....	.....	.....	.....	.....
Not Insane	4	.....	.....	.....	.....	.....
Totals	168	963	12	17	1	20

THE ONTARIO HOSPITAL, ORILLIA.

November 1st, 1921.

W. W. DUNLOP, ESQ.,
Inspector of Prisons and Public Charities,
Parliament Bldgs., Toronto, Ont.

SIR:—

I have the honour to present to you the Annual Report of the Ontario Hospital, Orillia, for the year ending October 31st, 1921. The most interesting of the figures set forth on the first page of the statistical report are the following:

	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	536	563	1,099			
In residence, October 31st, 1920				501	482	983
Admitted during the year 1921:—						
By Warrant	11	2	13			
By Medical Certificate	93	62	155	104	64	168
Total number under treatment during year				605	546	1,151
Discharges during year:—						
As improved	5	6	11			
As unimproved	12	6	18			
Total number discharged during year	17	12	29			
Died	29	24	53			
Eloped	9	1	10			
Transferred	3		3	58	37	,95
Remaining in Hospital, October 31st, 1921				547	509	1,056

It will be seen from the foregoing that the population of this hospital has increased from 983 on October 31st, 1920, to 1,056 on October 31st, 1921. The number of admissions during the year was 168—104 males and 64 females, while the deaths were 53, a reduction of 16 from the figures of the year preceding. Of the admissions awarded during the year, 33 were under eight years of age, 41 between eight and twelve, 60 between twelve and twenty, and 34 over twenty. Of the latter class, five had distinctly passed into the age period when some other provision than confinement in this hospital should have been made for their comfort and protection. Two of these were 47 years of age, one 48, one 51, and one 66. We are gratified that we have been enabled in such a large measure to keep the places in this hospital for children and young men and young women for whose wellbeing and security it was established. Some of the civic authorities of the Province are unreasonably insistent on the admission of people who are distinctly outside the training age and do not require the protection that this hospital affords.

I am happy to be able to report that while our death rate was rather high for the year 1921, we did not suffer from any serious epidemic and the general

health of our population was quite satisfactory. The difficulty experienced during the past few years in securing and retaining an adequate staff of attendants and nurses has been largely overcome. We have to-day the most complete and, I may add, the most efficient staff we have had in the past ten years. The standardization of employees, the wages readjustment and the inauguration of the superannuation system of a year ago have had a remarkably gratifying effect in raising the status of this service. For the benefits, present and prospective, resultant from this practical interest in the welfare of the employees of the Ontario Hospitals, the entire service, I am sure, is deeply grateful.

I would again emphasize the recommendations in former reports that our training school be enlarged by the addition of new departments and new teachers. Our present teaching staff is proficient but the rooms are overcrowded and the teachers are unable to achieve the results that would easily be obtainable if the congestion were relieved. I hope that during the year we have now entered upon the Department will see its way clear to provide at least three more teachers. Ten years ago a six or seven year old child was quite an attraction, if not a curiosity here. To-day on the boys' side alone we have between 80 and 100 little fellows about that age. This, it is quite apparent, places heavy responsibilities on our training department. We owe to these children, who are trainable, every advantage in the way of education that this hospital can afford. Not that it is intended to fit them for places in the outer world, but the ability to read and write and count or become proficient in any of the industrial departments means increased usefulness and consequently increased happiness for the child and a greater service on the part of the children of the institution in which nearly all of them must find a permanent home. Of the 168 admissions awarded during the year, 114 are morons and imbeciles, 31 of the former and 83 of the latter.

A great boon to the population of this hospital came with the opening of the new highway between here and the town of Orillia. This is part of the Provincial Highway running from Toronto to North Bay. The Minister of Public Works gave a sympathetic hearing to the appeal of this institution and the farmers in the neighbourhood for the short and easily graded road through our property and Dunedin Park. The new highway, constructed at a very reasonable cost, shortens the distance to town by over half a mile, cuts out three steep hills and increases the hauling capacity of truck or team by over fifty per cent. The Ontario Hospital section of the new highway is probably as impressive an argument in favour of a good roads policy as can be found anywhere. We are now within a ten minute drive or twenty-five minute walk of the centre of the town.

I should like to see better provision made for the amusement and entertainment of our people, especially during the winter months. A billiard room and bowling alley would afford exercise and enjoyment to both nurses and attendants. Now that our building programme for more accommodation and comfort for the patients has been completed, moderate measures to brighten our community life would appear to be in order.

The production on our farm during the year just closed has been considerably above the average. Of small fruits, roots and vegetables we had an especially good crop. Potatoes were again the leader in output and value and we should have at least 1,500 bushels of select seed potatoes available in the coming spring. As time goes on we feel more keenly the necessity for a greater area for farming operations. I have, in previous reports, made recommendations for the stablishment of a farm colony. I can only repeat here that if we had 200 more acres of arable land within reasonable distance of this place we could

make the problem of provisioning our population of very little concern to the Treasurer of the Province. Without much expense, beyond the initial outlay for the land, we could establish a farm colony that would take care of at least fifty of our male population and make their labour highly remunerative.

The main buildings of this hospital, used as a training school, and the two older cottages, were erected between 1886 and 1890. Inside repairs have been well attended to but the exteriors have been neglected; the woodwork badly needs painting and there is considerable patching required by bricklayers and tinsmiths.

We are looking forward to the establishment of a poultry farm. It is the one thing necessary to round out our livestock department. The question, "Can poultry be made pay?" has been answered in every case, where the enterprise has been properly conducted, in the affirmative. The same answer will be forthcoming here providing we can obtain the services of an experienced and capable poultryman.

During the year that has closed we have had some changes in our staff. Dr. S. H. Perkins resigned in November to open a practice in Hamilton. He was succeeded by Dr. J. R. Smith who resigned in August, 1921, to take over a practice in Galt, and in October, 1921, Dr. C. H. Watson was appointed Assistant Physician. Miss Jennie Vaillant and Miss Flo Sissons, who had given years of faithful service as teachers, retired from the service and Miss Laura Smith and Miss Maude Lawrence took their places.

I beg to thank the members of our staff for their valuable services and hearty co-operation during the year and to you, Sir, allow me to express my appreciation of your unfailing courtesy and wise counsel.

I have the honour to be, Sir,

Your obedient servant,

J. P. DOWNEY,
Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, ORILLIA.

For the Year Ending October 31st, 1921.

TABLE No. 1.—ORILLIA.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

———	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	536	563	1,099			
In Residence, October 31st, 1920	.....	.....	.....	501	482	983
Admitted during year 1921:—						
By Warrant	11	2	13			
By Medical Certificate	93	62	155	104	64	168
Total number under treatment during year	.....	.....	.....	605	546	1,151
Discharges during year:—						
As recovered	.....	.....	.....			
As improved	5	6	11			
As unimproved	12	6	18			
As not insane	.....	.....	.....			
Total number discharged during year	17	12	29			
Died	29	24	53			
Deported	.....	.....	.....			
Eloped	9	1	10			
Transferred	3	.....	3	58	37	95
Remaining in Hospital, October 31st, 1921	58	37	95	547	509	1,056
Total number admitted since opening of Hospital	.....	.....	.....	1,821	1,640	3,461
Total number discharged since opening of Hospital	219	134	353			
Total number died since opening of Hospital	958	828	1,786			
Total number deported since opening of Hospital	2	3	5			
Total number eloped since opening of Hospital	42	2	44			
Total number transferred since opening of Hospital	53	164	217	1,274	1,131	2,405
Total remaining in Hospital, October 31st, 1921	.....	.....	.....	547	509	1,056
Daily average population	505	491	996			
Collective days' stay of all patients in residence during year	184,004	179,478	363,482			
Number of applications on fyle	.....	.....	151			

TABLE No. 2.—ORILLIA.

Showing social state and religion of patients admitted during the year.

	Admissions of Year.			In Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	104	61	165	546	503	1,049
Married	.....	2	2	1	3	4
Widowed	.....	1	1	.....	3	3
Divorced	.....	.....	.....	.....	.....	.....
Separated	.....	.....	.....	.....	.....	.....
Unascertained	.....	.....	.....	.....	.....	.....
Totals	104	64	168	547	509	1,056
RELIGION.						
Baptists	6	3	9	21	24	45
Congregationalists	.....	1	1	.....	3	3
Episcopalians	22	15	37	115	109	224
Methodists	20	10	30	98	109	207
Presbyterians	13	12	25	97	85	182
Roman Catholics	17	6	23	88	52	140
Other Denominations	4	2	6	50	49	99
Unascertained	22	15	37	78	78	156
Totals	104	64	168	547	509	1,056

TABLE No. 3.—ORILLIA.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions	104	64	168
Total born in Canada	90	50	140
Armenia			
Assyria			
Austria			
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	6	8	14
France			
Finland			
Galicia			
Germany			
Greece			
Holland			
Hungary			
Ireland	1		1
Italy			
Japan			
Macedonia			
Other British Possessions			
Poland	1		1
Norway			
Roumania			
Russia	1		1
Scotland	1	4	5
South America			
Spain			
Sweden			
Turkey			
United States	3	2	5
West Indies			
Unascertained	1		1
Totals	104	64	168

TABLE No. 4.—ORILLIA.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.			
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc			
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc			
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc			
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc			
Domestic Service:— Waiters, Cooks, Servants, etc			
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc			
Miners, Marine Engineers, Railway Employees, Seamen, etc			
Labourers			
No Occupation	104	64	168
Unascertained			
Totals	104	64	168

TABLE No. 5.—ORILLIA.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District							4	3	7
Brant							11	5	16
Bruce	2		2				6	7	13
Carleton	1	1	2				16	20	36
Dufferin		1	1				1	5	6
Dundas							2	4	6
Durham	2	1	3				8	1	9
Elgin	4	3	7	1		1	8	8	16
Essex	1		1				9	8	17
Frontenac	2	4	6				12	7	19
Glengarry							5	1	6
Grenville	1		1				1	2	3
Grey	3	1	4				12	6	18
Haldimand		1	1				2	2	4
Haliburton	2		2	1		1	2	3	5
Halton							1		1
Hastings	6	2	8				25	6	31
Huron		1	1				7	4	11
Kenora									
Kent	3	1	4	2		2	7	4	11
Lambton							6	7	13
Lanark	3		3				6	1	7
Leeds		2	2				3	7	10
Lennox and Addington	2		2	1		1	7	7	14
Lincoln	2		2	1		1	6	7	13
Manitoulin									
Middlesex	6	3	9				23	14	37
Muskoka District							6	5	11
Nipissing District							8	7	15
Norfolk	1		1				1	7	8
Northumberland	2		2				7	7	14
Ontario		2	2				12	13	25
Oxford	2	2	4				12	11	23
Parry Sound District	1		1				7	8	15
Peel							3	10	13
Perth	3		3				6	7	13
Peterborough	1	2	3				8	7	15
Prescott	1		1				9	1	10
Prince Edward							7	2	9
Rainy River District								1	1
Renfrew		1	1				5	9	14
Russell							2	5	7
Simcoe	6	4	10				24	32	56
Stormont								3	3
Sudbury		3	3		1	1	1	4	5
Temiskaming	1		1				5	1	6
Thunder Bay District	1		1	1		1	1	1	2
Victoria and Haliburton	2		2				1	10	11
Waterloo		1	1				8	10	18
Welland	1	1	2				3	3	6
Wellington		1	1				8	11	19
Wentworth	5	3	8				22	39	61
York	39	23	62	4	1	5	191	151	342
Unascertained								5	5
Other Provinces									
Totals	104	64	168	11	2	13	547	509	1,056

TABLE No. 7.—ORILLIA.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female	Total.
Paternal Branch	8	4	12
Maternal Branch	14	7	21
Paternal and Maternal Branches	5	7	12
Collateral Branches	21	7	28
No Hereditary Tendency	37	26	63
Unascertained	19	13	32
Totals	104	64	168

TABLE No. 8.—ORILLIA.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge	21	11	32
Discharged, Recovered While on Probation			
" Improved	3	2	5
" Unimproved	2	2	4
Died			
Returned to Hospital	4	6	10
Absent on Probation, October 31st, 1921	12	1	13

TABLE No. 9.—ORILLIA.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever		2	2
Influenza			
Cerebro-spinal Meningitis			
Diphtheria		2	2
Erysipelas			
Septicæmia		1	1
Dysentery	4	2	6
Syphilis			
Tuberculosis	14	4	18
Other Infections			
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi			
" " Lungs	2	1	3
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	1	1	2
Arterio-sclerosis			
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia	1	2	3
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord	1	2	3
" " Meninges	1		1
Totals—*Carried forward*	24	17	41

TABLE No. 9.—ORILLIA—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought forward*	24	17	41
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)		1	1
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy	3	5	8
Mental Diseases:—			
Exhaustion of Acute Mental Disease			
Exhaustion of Chronic Mental Disease	1		1
General Paresis			
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age		1	1
Accident			
Suicide			
Surgical Diseases	1		1
Gynæcological Diseases			
Malignant New Growths, or Cancer			
Unascertained			
Totals	29	24	53

TABLE No. 10.—ORILLIA.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses	1		1						
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses									
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)									
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism									
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic									
(b) Catatonic									
(c) Paranoid									
(d) Simple Form	1		1						
General Paresis									
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses									
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia									
(b) Pre-senile Delusional Psychoses									
(c) Senile Dementia								1	1
Manic Depressive Psychoses:—									
(a) Manic States									
(b) Depressed States									
(c) Mixed States									
Paranoia									
Totals—*Carried forward*	2		2					1	1

TABLE No. 10.—ORILLIA—*Continued.*

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought forward*	2		2					1	1
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses									
(b) Hysterical Psychoses									
(c) Sexualis Psychopathia									
States of Deficient Mental Development:—									
(a) Imbecility	70	44	114	13	11	24	17	7	24
(b) Idiocy	32	20	52	4	1	5	12	16	28
Not Diagnosed									
Not Insane									
Totals	104	64	168	17	12	29	29	24	53

TABLE No. 11.—ORILLIA.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1921.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month		22			1	4
From 1 to 2 months		18			1	2
" 2 " 3 "		13				
" 3 " 4 "		14				1
" 4 " 5 "		10				1
" 5 " 6 "		8				
" 6 " 9 "		43		2	1	4
" 9 " 12 "		23		1	2	3
" 12 " 18 "		54		3	5	6
" 18 months to 2 years		67		2	2	2
" 2 to 3 years		115		3	3	5
" 3 " 4 "		67				1
" 4 " 5 "		43			2	3
" 5 " 10 "		148			1	5
" 10 " 15 "		114				4
" 15 " 20 "		102				6
" 20 years and upwards		195				6
Totals		1,056		11	18	53

Total Fillings for Period	1,407
" Extractions	1,789
" Full Dentures	95
" Partial "	46
" Repair "	38
" Crowns	5
" Scaled	701
" Examined, O.K.	447
Total operations, November 20th to October 21st	4,528

ORILLIA ANNUAL DENTAL REPORT.

1920 AND 1921	Fillings.	Extractions.	Fast-mount.	Full Dentures.	Partial Dentures.	Repair Dentures.	Crowns.	Scaled.	Examined, O.K.
November, 1920	53	80						32	18
December	18	13						9	3
January, 1921	48	21			1	1		16	6
February	61	82			1			16	20
March	43	52		3	2	2	gold 1	32	9
April	32	36						21	21
May	42	36						25	18
June	37	24			1			39	6
July	37	24						39	6
August									
September	37	42						22	10
October	39	20			2		1	15	14
Totals	447	430		3	7	3	2	266	131

THE ONTARIO HOSPITAL, WOODSTOCK.

ANNUAL REPORT OF THE MEDICAL SUPERINTENDENT.

FOR THE YEAR ENDING OCTOBER 31ST, 1921.

W. W. DUNLOP, ESQ.,
Inspector of the Ontario Hospitals,
Parliament Bldgs., Toronto, Ont.

SIR:—

I have the honour to submit to you the Sixteenth Annual Report for the Ontario Hospital, Woodstock, for the year ending October 31st, 1921.

PATIENTS.

We have had about the usual number of patients during the year; all available vacancies being filled most of the time. We closed the year with the same number that we commenced with. We have had quite a few cases during the year who have shown decided improvement.

IMPROVEMENTS.

We have made a number of splendid improvements during the year as follows:

All poles and wires have been taken down, and wires placed underground. This makes a wonderful change both from appearance and service.

Pillars for the electric lights have been built and put in place.

The plumbing in the one female cottage has been completely changed to a modern plan, which is satisfactory in every detail. The bathing system of this building was also changed by the installing of spray baths. These we find most complete.

Additional jacket heaters were installed, one in each building, for the purpose of heating the water for bathing, etc.

Many repairs have been made on the cottages.

The cow barns were changed by the fitting up of petitions, troughs, etc.

The interior of piggery was completely changed. New pens were built and generally fitted up.

FARM AND GARDEN.

The returns from the farm were very satisfactory and considering the year we had a good crop. The returns from the garden were excellent. All vegetables and small fruit yielded well.

SERVICES AND ENTERTAINMENTS.

The usual Sunday services were carried on each Sabbath. Also many concerts and entertainments during the week, for which we are very grateful to the Ministerial Association and the members of the various clubs and organizations of the City of Woodstock who so whole-heartedly rendered their services.

CONCLUSION.

In concluding this my Sixteenth Annual Report I wish to thank you, Sir, for your able assistance.

I have the honour to be, Sir,
Your obedient servant,

J. J. WILLIAMS,
Medical Superintendent.

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE ONTARIO HOSPITAL, WOODSTOCK.

For the Year Ending October 31st, 1921.

TABLE No. 1.—WOODSTOCK.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

———	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	96	106	202			
In Residence, October 31st, 1920				101	101	202
Admitted during year 1921:—						
By Warrant						
By Medical Certificate	21	14	35	21	14	35
Total number under treatment during year				122	115	237
Discharges during year:—						
As recovered						
As improved	1	2	3			
As unimproved	7	1	8			
As not insane						
Total number discharged during year	8	3	11			
Died	18	6	24			
Deported						
Eloped						
Transferred				26	9	35
Remaining in Hospital, October 31st, 1921				96	106	202
Total number admitted since opening of Hospital				388	311	699
Total number discharged since opening of Hospital	156	107	263			
Total number died since opening of Hospital	136	98	234	292	205	497
Total number deported since opening of Hospital						
Total number eloped since opening of Hospital						
Total number transferred since opening of Hospital						
Total remaining in Hospital, October 31st, 1921				96	106	202
Daily average population	97.74	103.70	201.44			
Collective days' stay of all patients in residence during year	35,677	37,845	73,531			
Number of applications on fyle						

TABLE No. 2.—WOODSTOCK.

Showing social state and religion of patients admitted during the year.

	Admissions of Year.			In Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.
SOCIAL STATE.						
Single	17	8	25	84	87	171
Married	3	4	7	9	16	25
Widowed	1	2	3	3	3	6
Divorced						
Separated						
Unascertained						
Totals	21	14	35	96	106	202
RELIGION.						
Baptists	1	2	3	8	11	19
Congregationalists	1		1	1		1
Episcopalians	4	5	9	17	24	41
Methodists	7	4	11	24	32	56
Presbyterians	3		3	21	27	48
Roman Catholics	4	2	6	12	7	19
Other Denominations	1	1	2	12	5	17
Unascertained				1		1
Totals	21	14	35	96	106	202

TABLE No. 3.—WOODSTOCK.

Showing nativity of patients admitted during the year.

Nativity.	Admissions of Year.		
	Male.	Female.	Total.
Total Admissions			
Total born in Canada	14	8	22
Armenia			
Assyria			
Austria			
Australia			
Belgium			
Bulgaria			
Central America			
China			
Denmark			
England	6	5	11
France			
Finland			
Galicia			
Germany			
Greece			
Holland			
Hungary			
Ireland			
Italy			
Japan			
Macedonia			
Other British Possessions			
Norway			
Roumania			
Russia			
Scotland	1		1
South America			
Spain			
Sweden			
Turkey			
United States		1	1
West Indies			
Unascertained			
Totals	21	14	35

TABLE No. 4.—WOODSTOCK.

Showing the occupation of those admitted during the year.

Occupation.	Admitted this Year.		
	Male.	Female.	Total.
Professional:— Clergy, Military and Naval Officers, Physicians, Lawyers, Architects, Artists, Authors, Civil Engineers, Surveyors, etc.			
Commercial:— Bankers, Merchants, Accountants, Clerks, Salesmen, Stenographers, Typewriters, etc	1	1	2
Agricultural and Pastoral:— Farmers, Gardeners, Stockmen, etc	2		2
Mechanics at Outdoor Vocations:— Railway and Stationary Engineers, Blacksmiths, Carpenters, Engine Fitters, Sawyers, Painters, Police, etc	2		2
Mechanics, etc., at Sedentary Vocations:— Shoemakers, Bookbinders, Compositiors, Weavers, Tailors, Seamstresses, Bakers, Factory Workers, etc	1		1
Domestic Service:— Waiters, Cooks, Servants, etc		1	1
Education and Higher Domestic Duties:— Governesses, Teachers, Students, Housekeepers, Nurses, etc		3	3
Miners, Marine Engineers, Railway Employees, Seamen, etc			
Labourers	8		8
No Occupation	7	9	16
Unascertained			
Totals	21	14	35

TABLE No. 5.—WOODSTOCK.

Showing the counties and districts from which patients have been admitted during the year.

Counties and Districts.	Admitted during Year.			Warrant Cases. Admitted during Year.			Remaining in Residence.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Algoma District							1		1
Brant							3	3	6
Bruce							1	1	2
Carleton		3	3				4	2	6
Dufferin	1		1				2		2
Dundas		1	1				1	1	2
Durham									
Elgin							3	2	5
Essex	1		1				4		4
Frontenac		1	1					1	1
Glengarry									
Grenville									
Grey	1		1				5	3	8
Haldimand									
Haliburton									
Halton							1	1	2
Hastings	2		2				4	2	6
Huron							1	3	4
Kenora									
Kent							2	4	6
Lambton							2	4	6
Lanark							1	1	2
Leeds		1	1				1	2	3
Lennox and Addington									
Lincoln		2	2				1	4	5
Manitoulin									
Middlesex	2	1	3				4	5	9
Muskoka District							1	2	3
Nipissing District									
Norfolk							1	1	2
Northumberland							2	1	3
Ontario							1	2	3
Oxford							4	5	9
Parry Sound District		1	1				1	2	3
Peel							1	1	2
Perth							1	2	3
Peterborough							1	1	2
Prescott									
Prince Edward								1	1
Rainy River District									
Renfrew	1		1				1	1	2
Russell								1	1
Simcoe	1		1				1	3	4
Stormont							1	1	2
Sudbury									
Temiskaming									
Thunder Bay District							2		2
Victoria								2	2
Waterloo	2		2				2	1	3
Welland	1		1					1	1
Wellington								3	3
Wentworth	1		1				5	6	11
York	8	4	12				29	29	58
Unascertained									
Other Provinces							1	1	2
Totals	21	14	35				96	106	202

TABLE No. 6.—WOODSTOCK.

Showing the assigned causes of insanity in the cases admitted during the year.

Causes.	Male.	Female.	Total.	Inherited Predisposition.			Unascertained.
				Male.	Female.	Total.	
MORAL.							
Adverse Conditions (such as loss of friends, business troubles, etc.)							
Mental Strain, Worry and Overwork (not included in above)	2		2	1		1	
Religious Excitement							
Love Affairs, including seduction	1		1				
Fright and Nervous Shock		1	1				
PHYSICAL.							
Alcoholism							
Sexual Excess							
Venereal Diseases							
Masturbation							
Insolation							
Accident or Injury	4	1	5				
Pregnancy		1	1		1	1	
Parturition and Puerperium							
Lactation							
Climacteric Period		1	1				
Fevers							
Privation and Overwork		1	1				
Epilepsy							
Other Convulsive Diseases	1		1				
Diseases of Brain and Skull							
Senility							
Exophthalmic Goitre							
Epidemic Influenza							
Abuse of Drugs							
Loss of Special Sense							
Uræmia							
Other Auto infection							
Other Bodily Diseases	1		1				
HEREDITARY.							
Congenital Defect							
Unascertained	12	9	21	5	5	10	
Not Insane							
Totals	21	14	35	6	6	12	

TABLE No. 7.—WOODSTOCK.

Showing hereditary tendency to insanity in patients admitted during the year.

	Admitted during Year.		
	Male.	Female.	Total.
Paternal Branch	1	4	5
Maternal Branch		1	1
Paternal and Maternal Branches			
Collateral Branches	5	1	6
No Hereditary Tendency	1	1	2
Unascertained	14	7	21
Totals	21	14	35

TABLE No. 8.—WOODSTOCK.

Showing summary of probational discharges during the year.

	Male.	Female.	Total.
Number Granted Probational Discharge		1	1
Discharged, Recovered While on Probation			
" Improved			
" Unimproved		1	1
Died			
Returned to Hospital			
Absent on Probation, October 31st, 1921			

TABLE No. 9.—WOODSTOCK.

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Specific Infectious Diseases:—			
Typhoid Fever			
Influenza			
Cerebro-spinal Meningitis			
Diphtheria			
Erysipelas			
Septicæmia			
Dysentery			
Syphilis			
Tuberculosis			
Constitutional Diseases:—			
Rheumatism			
Arthritis Deformans			
Diabetes Mellitus			
Diseases of the Digestive System:—			
Mouth, salivary glands			
Pharynx			
Tonsils			
Œsophagus			
Diseases of the Intestines:—			
Diseases of the Liver			
" " Pancreas			
" " Peritoneum			
Diseases of the Respiratory System:—			
Diseases of the Nose and Larynx			
" " Bronchi			
" " Lungs	3		3
" " Pleura			
Diseases of the Circulatory System:—			
Diseases of the Pericardium			
" " Heart	1		1
Arterio-sclerosis	1		1
Aneurism			
Diseases of the Blood and Ductless Glands:—			
Anæmia			
Pernicious Anæmia			
Leukæmia			
Exophthalmic Goitre			
Diseases of the Genito-Urinary System			
Diseases of the Nervous System:—			
Diseases of the Nerves			
" " Spinal Cord			
" " Meninges			
Totals—*Carried forward*	5		5

TABLE No. 9.—WOODSTOCK—*Continued.*

Showing the causes of death of patients who died during the year.

Cause of Death.	Died during Year.		
	Male.	Female.	Total.
Totals—*Brought forward*	5		5
Organic Diseases of the Brain, (Tumor, Abscess, Embolism, Thrombosis, Hæmorrhage and other gross lesions)	1		1
Functional Nervous Diseases, (Paralysis Agitans, Chorea, Eclampsia, Hysteria)			
Epilepsy	12	5	17
Mental Diseases:—			
Exhaustion of Acute Mental Disease			
Exhaustion of Chronic Mental Disease			
General Paresis			
Intoxications:—			
Alcoholism			
Morphinism			
Metallic Poisoning			
Heat Stroke			
Debility of Old Age			
Accident			
Suicide			
Surgical Diseases			
Gynæcological Diseases			
Malignant New Growths, or Cancer		1	1
Totals	18	6	24

TABLE No. 10.—WOODSTOCK.

Showing form of mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Infection Psychoses:—									
(a) Fever Delirium									
(b) Infection Delirium									
(c) Post Infection Psychoses									
Exhaustion Psychoses:—									
(a) Collapsed Delirium									
(b) Acute Confusional Psychoses									
(c) Neurasthenia									
Intoxication Psychoses:—									
(a) Acute Intoxications									
(b) Chronic									
(a) Alcoholism (acute and chronic)									
(b) Delirium Tremens									
(c) Korsakow's Psychoses									
(d) Acute Alcoholic Hallucinosis									
(e) Alcoholic Hallucinatory Dementia									
(f) " Paranoia									
(g) " Paresis									
(h) Morphinism									
(i) Cocainism									
Thyroigenous Psychoses:—									
(a) Mixœdematous Psychoses									
(b) Cretinism									
Dementia Præcox:—									
(a) Hebaphrenic									
(b) Catatonic									
(c) Paranoid									
General Paresis									
Organic Dementias:—									
(a) Cerebral Sclerosis									
(b) Huntingdon's Chorea									
(c) Multiple Sclerosis									
(d) Cerebral Syphilis									
(e) Tabetic Psychoses									
(f) Arterio Sclerotic Psychoses									
(g) Cerebral Tumor, Abscess, Hæmorrhage									
Involution Psychoses:—									
(a) Melancholia									
(b) Pre-senile Delusional Psychoses									
(c) Senile Dementia									
Manic Depressive Psychoses:—									
(a) Manic States									
(b) Depressed States									
(c) Mixed States									
Paranoia									
Totals—*Carried forward*									

TABLE No. 10.—WOODSTOCK—*Continued.*

Showing form of Mental disease of patients admitted, discharged and died during the year.

Mental Disease.	Admitted.			Discharged.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Totals—*Brought forward*									
Psychoses from Constitutional Neuroses:—									
(a) Epileptic Psychoses									
(b) Hysterical Psychoses									
(c) Sexualis Psychopathia									
States of Deficient Mental Development:—									
(a) Imbecility									
(b) Idiocy									
Not Diagnosed									
Not Insane									
Totals									

TABLE No. 11.—WOODSTOCK.

Periods.	Alleged duration of insanity prior to admission.	Length of residence of those remaining in Hospital on Oct. 31st, 1920.	Periods of treatment of those who were discharged recovered during the year.	Periods of treatment of those who were discharged improved during the year.	Periods of treatment of those who were discharged unimproved during the year.	Periods of treatment of those who died during the year.
Under 1 month		4				1
From 1 to 2 months		1			3	2
" 2 " 3 "		2				
" 3 " 4 "		3			1	1
" 4 " 5 "	1	2				
" 5 " 6 "		1				
" 6 " 9 "		8			2	1
" 9 " 12 "		6		1	1	1
" 12 " 18 "		22		1		2
" 18 months to 2 years		8			1	
" 2 to 3 years		20				2
" 3 " 4 "		17				2
" 4 " 5 "	2	14				1
" 5 " 10 "	8	42				5
" 10 " 15 "	6	45		1		6
" 15 " 20 "	5	7				
" 20 years and upwards.	13					
Totals	35	202		3	8	24

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOMEWOOD SANITARIUM, GUELPH, FOR THE YEAR ENDING OCTOBER 31st, 1921.

VOLUNTARY BRANCH

TABLE No. 1.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	75	75	150			
In Residence October 31st, 1920				37	24	61
Admitted during year 1921:—						
By Warrant						
By Voluntary forms	142	98	240	142	98	240
Total number under treatment during year				179	122	301
Discharges during year:—						
As recovered	8	8	16			
As improved	84	50	134			
As unimproved	22	24	46			
As not insane						
Total number discharged during year	114	82	196			
Died	9	3	12			
Deported						
Eloped	5	1	6			
Transferred	7	5	12	135	91	226
Remaining in Hospital October 31st, 1921				44	31	75
Total number admitted since opening of Hospital				2,218	1,028	3,246
Total number discharged since opening of Hospital	1,994	910	2,904			
Total number died since opening of Hospital	72	40	112			
Total number deported since opening of Hospital						
Total number eloped since opening of Hospital	54	4	58			
Total number transferred since opening of Hospital	54	43	97	2,174	997	3,171
Total remaining in Hospital, October 31st, 1921				44	31	75
Daily average population						
Collective day's stay of all patients in residence during year						
Number of applications on fyle						

ANNUAL STATISTICAL REPORT OF THE OPERATIONS OF THE HOMEWOOD SANITARIUM, GUELPH, FOR THE YEAR ENDING OCTOBER 31st, 1921.

INSANE BRANCH

TABLE No. 1.

Showing movements of patients in the Hospital for the official year ending October 31st, 1921.

——	Male.	Female.	Total.	Male.	Female.	Total.
Capacity of Hospital	75	75	150			
In Residence October 31st, 1920				23	63	86
Admitted during year 1920-21						
By Warrant						
By Medical Certificate	43	59	102	43	59	102
Total number under treatment during year				66	122	188
Discharges during year:—						
As recovered	4	14	18			
As improved	19	28	47			
As unimproved	4	11	15			
As not insane						
Total number discharged during year	27	53	80			
Died	10	9	19			
Deported						
Eloped		1	1			
Transferred	12	1	13	49	64	113
Remaining in Hospital October 31st, 1921				17	58	75
Total number admitted since opening of Hospital				808	865	1,673
Total number discharged since opening of Hospital	568	616	1,184			
Total number died since opening of Hospital	115	91	206			
Total number deported since opening of Hospital						
Total number eloped since opening of Hospital	12	3	15			
Total number transferred since opening of Hospital	96	97	193	791	807	1,598
Total remaining in Hospital October 31st, 1921				17	58	75
Daily average population (total, insane and voluntary)						153.75
Collective day's stay of all patients in residence during year						
Number of applications on fyle						

REPORTS

OF

COMMISSION

Appointed to Inquire Into

HYDRO-ELECTRIC RAILWAYS

CONTAINING

MAJORITY AND MINORITY REPORTS

AND APPENDICES

PRINTED BY ORDER OF

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MAJORITY REPORT

To His Honour, Lionel Herbert Clarke, Esquire,
Lieutenant-Governor of the Province of Ontario.

May it please your Honour:

The Commissioners appointed under *Order-in-Council* bearing date the 21*st day of July*, 1920, respectfully beg to report as follows:

We were, by said Order-in-Council, directed:

(1) "To inquire into and report upon the whole question of Hydro Electric Railways, and all matters which, in the opinion of the Commissioners are relevant thereto, with particular reference to the matters that are raised by and discussed in the statement of the Government issued on the 6th day of July, 1920," a copy of which was attached to the Order-in-Council, and

(2) "To make such suggestions and recommendations in connection with or arising out of any of the subjects thus indicated, as in the opinion of the Commission may be desirable."

While the main inquiry is as to the proposed construction by the Hydro Electric Power Commission of Ontario, (on behalf of certain municipalities interested therein) of a system of electric (or radial) railways, through a part of Ontario extending, roughly, from Bowmanville on the east to Niagara Falls on the west, with a route mileage of about 326 miles, at an estimated cost of approximately $45,000,000 *other matters were raised* in the Government statement, and submitted to us for inquiry and consideration and which, it is appropriate to at once and briefly refer to as follows:

MATTERS RAISED BY AND DISCUSSED IN THE GOVERNMENT STATEMENT

(1) The existing condition and outlook of the electric railway business.

(2) Will the projected railways be self-supporting, if constructed?

(3) (*a*) To what extent, if any, has the acquisition of the Canadian National Railway System, since the project was presented to the municipalities, affected the consideration thereof? (*b*) What weight should be attached to the suggestion that the Province "must not come into competition with Canadian National Railways?"

(4) To what extent, if any, has the large expenditure on the Chippawa Power scheme, since the project was so presented to the Municipalities, affected the consideration thereof?

(5) To what extent, if any, has the adoption by the Provincial Government of an improved highways policy, since the project was so presented to the Municipalities, affected the consideration thereof?

(6) To what extent will motors and motor trucks operating on improved highways, compete with and affect the projected railways?

(7) The existing debt and obligations of the Province in relation to the project.

(8) The relation, as well, of national and municipal debts thereto.

(9) The fact that the construction and operation of electric railways is something separate from the main object of the Hydro Electric Power Commission of Ontario, namely the development and sale of power.

(10 Are the projected railways to be regarded as a public necessity?

We have inquired into all of these questions, and from the evidence and documents, reached certain conclusions which we shall first state, leaving their discussion to be dealt with in our reasons .which follow later.

FINDINGS

(1) The financial condition of electric railways in Ontario and the United States in and prior to 1920, has been so precarious and unsatisfactory, and the outlook for improvement so dubious and discouraging, that the construction of the proposed system of electric

railways should not, in our judgment, be entered upon unless the evidence of competent operating experts fully justifies the conclusion that they will be self-supporting.

(2) Upon full consideration of the evidence, and the proper weight to be given to the witnesses, we are of opinion that the proposed electric railways would not be self-supporting.

(3) We are further of opinion that the construction of the proposed electric railways paralleling and competing as they would with the Canadian National Railway System, would be unwise and economically unsound, and would strike a serious blow at the success of Government Ownership.

(4) We are further of opinion that until the Chippawa Power scheme, now estimated to cost $60,000,000 or upwards is completed, and has been in operation for sufficient length of time to be self-supporting, the Province would not be justified in endorsing for the construction of an electric railway system at an initial estimated cost of $45,000,000.

(5) We are further of opinion that the endorsement by the Province of bonds of the Hydro Electric Power Commission for systems of electric railways in various parts of the Province, at the instance of the municipalities concerned, is highly dangerous and may lead the Province into great financial difficulties. The endorsement for one locality would give rise to demands for the like accommodation for other localities, which it will be hard for any Government to refuse, and might result in the Province being drawn into serious financial liabilities, and we would therefore suggest that Government endorsement of such bonds should be discontinued. To the risk involved in accommodation endorsements, it is no answer to say that they are mere matters of form involving no real liability. Individual and corporate experience is to the contrary.

(6) Further, we are of opinion that the expenditure of $25,000,000 on improvement of public highways in the Province having been begun, it would be unwise to commence the construction of the electric railways in question until the effect in the improvement of these highways has been ascertained, and the use of them by motor cars and motor trucks (whose competition with electric railways has been found so keen and difficult to meet elsewhere) made clearly apparent.

(7) We are further of opinion that the rapidly increasing debts and financial commitments of the Dominion, Province and Municipalities have aroused well-founded apprehension in the minds of thoughtful citizens, and are a cogent reason against the embarkation at this time in the construction of the contemplated electric railways.

THERE ARE, IN ADDITION, SOME GENERAL MATTERS which it may be well to refer to, and deal with, before coming to the main reasons of our report.

1. It is to be observed that we have, under consideration,

(a) A plan or system of electric (or radial) railways, with original and supplemental estimates prepared by the Hydro Electric Power Commission of Ontario for the municipalities interested, and as to which we have already indicated our conclusions and findings,

(b) A plan of Bion Arnold with substantial changes from the first, and estimates framed in connection therewith, as to which we intend our findings to equally apply.

(c) It has been suggested that if either of or both these proposed schemes were found to be financially unfeasible, some different or modified scheme of construction in the territory might be deduced from the evidence.

We shall make reference to this later, under the head of "Alternative Suggestions."

2. We had expected to complete our inquiry and make our report much earlier. We think it only fair to say that a considerable part of the delay, and much addition to the total expense, were occasioned by the course pursued by the Hydro Electric Power Commission of Ontario, and the Municipal Hydro Electric Railway Association, in connection with the investigation. We have prepared a statement setting forth in some detail the progress of the proceedings, by which we think this will be made apparent. *(Appendix 2).*

3. The Hydro Electric Power Commission of Ontario made a fundamental error when preparing the original estimates, and it was repeated when the supplementary estimates were prepared, in not seeking and securing the assistance of experienced operating men, at all events insofar as operating costs and possible revenues were concerned.

4. This Radial Railway Inquiry was not one in any sense directed to the administration of Hydro power operations by the Commission in charge thereof. We are of opinion that the development and sale of power is an essential public utility that rightly tends to monopoly. We share the view that there has been a good measure of success under the Hydro Electric Power Commission in this regard and that much credit should properly be given to the Commissioners and to the officials, particularly to Mr. Gaby.

5. Admittedly electric railways are of great utility to the people and serve them in a very close and intimate way. The business of electric railway operation is largely a local one and very competitive, different in many respects from that of power supply. While the railway system proposed would be a convenience and of considerable utility and advantage for transportation within the territory, we consider it questionable whether it can, under all existing circumstances, be properly called an essential public utility of real necessity.

6. One of the things that attracted our attention was the apparent inequalities in the division or apportionment among the municipalities of the capital cost in connection with the proposed system of electric railways. The large amount alloted to some of the townships which had a comparatively small population to be served and benefitted, seemed difficult of explanation. This could not well be fully examined into. To the extent that it could, the result is shown in appendix 5, prepared by Price, Waterhouse & Company for us and dealing with the amounts inserted in the by-laws so far as submitted.

7. (*a*) The net debt of the Dominion of Canada increased from $333,996,850.14 in 1914 to $2,248,868,623.79 in 1920.

(*b*) The debt of the Province of Ontario increased from $50,052,876.57 (direct $40,405,535.96, indirect $9,647,340.61) in 1914 to $159,752,053.73 (direct $128,191,754.16, indirect $31,560,299.57) in 1920. At June 15th, 1921, this had increased to $167,082,414.95.

(*c*) The net debt of the City of Toronto has increased from $60,564,385.00 in 1914 to $75,452,881.00 in 1920.

(*d*) Advances by the Province to Hydro:

To October 31st, 1920	$ 66,312,501.10
Advanced in fiscal year 1921, to June 15th	21,500,000.00
	$ 87,812,501.10
In addition, there was appropriated at last Session, and still unexpended at June 15th, the sum of	$ 15,437,700.00
	$103,250,201.10

In appendix 6 will be found fuller details of these.

8. Attention was drawn, in the argument before us, to the statement in a letter of Sir Adam Beck to the Prime Minister, with reference to the Port Credit and St. Catherines Railway, that the Commission had "issued bonds to the extent of $11,360,363, all of which have been guaranteed by the Province." A letter was sent by the Commission to the Attorney-General of the Province, asking to be furnished with a statement of the moneys the Province had advanced to date on account of the railways under investigation, and "the extent to which, if any, the bonds mentioned as said to have been thus endorsed by the Province, had been pledged (or sold) to raise money thereon." Some correspondence followed, which is found in Appendix 8.

In the correspondence is included a letter of the auditor, Mr. Clarkson, dealing with these expenditures as elsewhere referred to. In Appendix 13 the amount thereof, namely $1,254,241.11 is given, with particulars thereof. These expenditures have been made, notwithstanding that the question of whether the Province would or would not endorse the bonds of the Hydro Electric Power Commission, for the entire scheme, had not as yet been determined. It is to be noted, however, that under the late Government, an order-in-council, bearing date August 8th, 1919, had been approved with reference to an issue of bonds from time to time for the amount required for the Port Credit, Hamiliton and St. Catherines undertaking. It appears that $1,200,000 of the issue have been pledged, in connection with such expenditures.

In the correspondence, a reference is also made to alleged authority for expenditures under a letter of Sir William Hearst, then Premier.

If our view, as to the inadvisability of the Province endorsing the bonds for the construction of the project is given effect to, then the question of these expenditures so made will probably arise for consideration. The rights-of-way could, no doubt, be sold for substantial sums or otherwise dealt with, and the sum of $335,048.23 for ties, said to have been contracted for before July 21st, could no doubt be repaid by sale thereof.

The Government would have to deal with the question of any deficiency or loss in the whole matter, and also with the disposition to be made of the balance of the bonds, namely $10,160,360, which are said to be in the vaults of the Hydro Electric Power Commission unsigned and unsealed, and according to the present Government not at present available for expenditure unless it decides to proceed with the work. If, on the other hand, the municipalities, after full consideration of the facts as now disclosed, were to decide to go on with the project themselves, and at their own financial cost and risk, the entire amount of the expenditures could be recouped by them.

II PRELIMINARY CONSIDERATIONS

A fundamental error was, in our opinion, made by the Hydro Electric Power Commission of Ontario, when the original estimates were prepared. It was repeated when the supplementary estimates were prepared. It consisted in not seeking and securing assistance of experienced operating men, at all events insofar as operating costs and possible revenues were concerned.

In a general way, Mr. Gaby had oversight of the preparation of the entire estimates. The Hydro Electric Power Commission had had some experience in construction costs in connection with the London & Port Stanley Railway. Clearly, Mr. Gaby had little practical experience to qualify him to undertake or supervise the preparation of estimates of probable operating costs and anticipated revenues in connection with a system of electric railways. The construction estimates were turned over to Mr. T. U. Fairlie, Departmental Head of Railway Engineering on the Hydro staff. He seems to be a man of experience. His estimates were prepared with care and detail and have not been very seriously called in question. The road is designed to be of a high class and one criticism of it is that the cost of construction per mile is greater than needed or warranted.

With reference to the estimates for construction costs, some questions arose on the one hand with reference to the possible failure to make proper allowance for sinking fund, depreciation and the like, and on the other as to whether in the light of changed conditions their total estimated cost might not be cut down by say fifteen per cent. A great deal of controversy, however, centred around the estimates for operating expenses and for revenues. The preparation of the estimates for these was entrusted to Mr. W. G. Hewson, a young electrical engineer on the Hydro staff, with considerable knowledge in electrical engineering matters, but without the experience, which, in our opinion, was necessary to qualify him for the work thus laid on him.

The proposed radial railways are singular in certain respects. The cost of construction per mile is admittedly high; the operating costs, upon the evidence as a whole, are low; the anticipated revenues are higher than experience has found to be attainable elsewhere except under unusual conditions. The per mile cost of operation is low. The operating ratio is low. Operating men of experience, we were told, could go over a territory, observe the number and location of the population, the character of the industries, and the like, and arrive at a fairly reasonable and reliable estimate of the business which might be expected to be done and the cost of operation of a road of a particular type.

The Hydro-Electric Power Commission, in fact, seems to have consulted no man of operating experience but relied mainly on their own officials, who were inexperienced in this particular kind of work. It would appear to us that in setting out to obtain information on which to make estimates for projected electric railways, the natural and proper course would be to obtain the actual business done and revenue derived from the roads in the territory in question. It is said, and probably with some truth, that they could not obtain from the existing steam and electric railways operating in the territory anything like full details of the

business they were doing, as these would not be disclosed to them if inquiries were made, and thus, so far as they were concerned, they had in this respect to depend on published annual reports, regarded as incomplete.

The second important source of information would appear to us to be that gained through inquiries as to roads operating elsewhere, either in Canada or the United States, somewhat comparable in territory, population, industries and the like. An attempt appears to have been made to get considerable information of this kind. Information of this kind would seem to us to suggest a warning against too sanguine expectations either as to low operating costs or high expected revenues.

The third mode of procedure would be to make inquiries and surveys through the territory in question and thus endeavor to ascertain what was the passenger and freight business which could be reasonably expected to be derived therefrom. This was the course pursued in very considerable detail by the Hydro-Electric Power Commission when preparing their original estimates and the results were also carried into their supplementary estimates. The same course seems to have largely been followed by Mr. Arnold, Mr. Saeger and their assistants in their investigations commencing in August, 1920, and continuing until June, 1921. It would seem that only to the extent that such inquiries and investigations would approach the number of actual passengers carried through the territory by existing transportation facilities and the actual freight, carload and less than carload, and otherwise, handled by these, would the results be likely to be reasonably accurate. If they appeared to go substantially beyond these, some doubt as to their accuracy would, as one would think, arise. Quite early in the investigation, it appeared clearly necessary to us to obtain the results of the actual operations of the railways doing business in the territory. We would thus have actual and practical data which the Hydro Commission might not have been in a position to get and which was so desirable. For this reason, we called officials from all of the railways, steam and electric, in the territory, and obtained from them evidence and statistics of their operating costs and revenues. Notwithstanding that this was from then on available, no real attempt seems to have been made by the Hydro-Electric Power Commission, or the Municipal Hydro-Electric Railway Association, or by Mr. Arnold or Mr. Saeger, to utilize or apply this evidence. Throughout their reliance seems to have been mainly placed on their inquiries and surveys. This, as it seems to us, was an error. While these surveys were made with care, and submitted in evidence with some detail, the figures resulting appeared to be too high and out of line with experience and the mode of distribution of the freight between the various points in the system was left a good deal to the haphazard discretion of the people making the surveys.

Upon the whole evidence, it seems clear that if these railways were constructed, they could not be operated at the cost estimated, and equally clear that the revenues expected could not be secured. One curious feature in this connection is the anticipation that in the first year of operation revenues would be obtained, which elsewhere had not been realized, even after long years of operation and building up. We should not overlook to mention that an engineer of prominence, namely, W. S. Murray, was in the spring of 1920 called in by the Hydro to supervise the estimates which they had prepared. He made a written report. One cannot read it without coming to the conclusion that on its very face, it shows him to have been too eager to endorse and to have made too little investigation to warrant him in doing so. As a curious example of his loose way of putting things, the following illustration from his report may be given: After quoting from a letter of Dr. Reid, the Minister of Railways to Sir Adam Beck, in part as follows: "As you are of opinion you will want the road (the Toronto & Eastern) I think it is better that we do no more construction in the meantime, but of course it is urgent that a decision be arrived at at the earliest possible moment in order that the road be constructed as a feeder for the Canadian National Railway System as originally intended" he (Murray) proceeds to draw this remarkable conclusion: "The above is an excellent presentation of the Minister of Railway's point of view regarding the *feeder relation* of the *steam road to the Toronto & Eastern Radial*." He was called as a witness, and it was then found that he had had little or no operating experience and it was made plain that his examination of the whole project and of the estimates was a cursory and incomplete one, amounting to little more than what he himself termed it "a report on a report." His endorsation of the estimates lent little or no weight thereto.

III HISTORY LEADING TO APPOINTMENT OF COMMISSION

The proposed Hydro System was being slowly developed while the previous Government was in power. Certain investigations had been made and certain moneys spent thereon. Bonds of the Hydro had pursuant to an Order-in-Council passed on August 8th, 1919, been issued for $11,360,363, re Port Credit to St. Catharines Railway.

Following the change of Government, on March 3rd, 1920, Mr. Drury wrote to Mr. G. T. Clarkson, the Auditor, a letter, asking him to inform him, in a brief manner as to:

"(1) The state of the affairs of each of the systems and companies controlled or operated by the Hydro-Electric Power Commission of Ontario.

"(2) Approximate amount of moneys which must be paid by the Province within the next two years, and be loaned to the Commission in order to allow it to complete works undertaken by it, and now in course of construction, and to pay debts which become due within that period."

On March 18th, 1920, the Premier wrote to Sir Adam Beck, referring to his letter to the auditor and enclosing a copy thereof, and asked the Hydro-Electric Power Commission to let him know the estimated cost of construction of the Chippawa Power Canal, and when it was expected the works would be completed; what the condition with respect to the water supply to the Canal was, and the amount of power it was proposed that the Chippawa Works should develop. He also expressed a desire to receive a report from the Commission as to the situation of the Hydro-Electric Radial Railways, with particulars of the line which the Commission contemplated constructing and operating; the estimated cost of construction and operation of the same; and also to what extent it was believed expenditures would be made in the connection, within the next year or two.

On March 19th, 1920, the Auditor replied and reported to the Premier in a document of considerable length. At page 25 appears the following:

> "In your letter you state that the Government is sympathetic to the Commission and you request me to express my opinion as to whether there are any reasons why support cannot be continued and extended to the Commission with benefit to the municipalities and the Province. In reply thereto I beg to report that there is, in my opinion, every reason to justify the Government in according a full measure of support to the Commission in its efforts to develop and utilize *the power resources* of this Province, particularly in view of the heavy advances in the cost of coal and other fuel which have taken place in the last year or two and the further increases which appear likely to occur in the near future. In providing such support to the Commission, however, there are, in my opinion, certain conditions to which the Province must pay regard and to which the Commission and the municipalities should also give attention in their own interests.
>
> "The most pressing matter is the ability of the Province to raise funds under present conditions for its own requirements and the purpose of other developments in view and at the same time continue to extend credits to the Commission so as to permit it to enter upon projects of magnitude. At the present time the debt of the Province is about $100,000,000 of which approximately $40,000,000 has been advanced in cash and securities to the Commission, while $10,000,000 in cash and securities has been paid for the purchase and use of the Central Ontario System which is owned by the Province and operated on its behalf by the Commission. The Province has in addition, guaranteed other securities to the amount of about $8,300,000 to permit the Commission to purchase the Ontario Power Company and certain other minor properties . . . . .
>
> ". . . . . Based upon estimates of the Commission and its Engineers upwards of $29,000,000 will now be required from the Province in cash within the next two years to complete works in course of construction and meet maturing liabilities, while a further $25,000,000 to $26,000,000 may require to be provided by the sale or issue of bonds of the Commission--guaranteed by the Province—for the purpose of Hydro-Electric Railway Lines. With present abnormal costs it is stated that the Commission may find it to be against the interests of the municipalities to proceed too

rapidly with construction work on such Hydro-Electric Railway Lines as to do otherwise may impose serious burdens for the future. In that event the sale or issue of the $25,000,000 to $26,000,000 of bonds mentioned may be effected gradually and as conditions warrant. In any event, however, the total amount now in contemplation to be provided on the credit of the Province (subject to the guarantee of the municipalities) is upwards of $55,000,000 or an amount in excess of one-half of the present debt of the Province. With such expenditures made upwards of $105,000,000 will stand invested in Hydro-Electric enterprises and the Central Ontario System, and of this amount approximately $65,000,000 will be represented by undertakings, the exact costs of *construction and operation* of which are still matters for the future to determine.

"At the present time Canadian securities cannot be sold in the United States except at excessive rates, unless principal and interest be made payable there, which of course, means that exchange would have to be paid on interest and principal payments as they fall due; the sale of new securities in England is out of the question. Accordingly, the probability is that a large proportion of the moneys now necessary for the purpose of the Commission may have to be borrowed in Canada. There can be no objection to this course if the Province is prepared to pay the rates of interest demanded. Money markets are not unlimited under present conditions, however, but they are more restricted than they have been in years. It is, therefore, necessary, so far as the Province is concerned, that it does not put too great a strain upon them if its high present grade ofcredit is to remain unimpaired and it is to continue able to borrow money without payment of too high a rate of interest.

"Under the above conditions and if the Province is to be left in the position where it can support the Commission in a proper manner and still provide for its other requirements at reasonable interest costs, it is essential, in my opinion, that there shall be the most complete confidence between the Government and the Commission to the *end that new projects shall not be entered upon—or substantial* additions—beyond *those of immediate necessity*,—be made to existing undertakings, without a complete and frank understanding in respect to each of them. Before new projects be entered upon, also, the Government should, in fairness to the Province, the Commission and the Municipalities, fully satisfy itself that they are based upon such business principles as will ensure that its guarantees are not likely to be called upon; at the same time moneys necessary for the purpose should be financed before construction of such work be commenced or their purchase undertaken.

"Moneys raised by the Province for the purpose of any Department of the Government or for the Commission *cannot, under the Audit Act, be paid over without a vote* of the Legislature, and when so voted they are strictly limited in amount. Under the Acts regulating its powers the *Commission has authority* to issue *bonds* and the *Treasurer of the Province* is empowered, subject to the approval of the Lieutenant Governor in Council, to guarantee the same, *but no limitations* are imposed in the Acts with respect to the aggregate amount of bonds which the Commission may issue or the Treasurer of the Province guarantee, with the approval of the Lieutenant Governor in Council. As the *liability of* the *Province is the same* to all intents and purposes *whether is raises* moneys direct or *guarantees* bonds of any undertaking, in that it must see that payment of all borrowings or guaranteed bonds be made, it is a matter worthy to be considered as to "*whether the Legislature* should have *direct control* over all the finances of the Province or the Treasurer of Ontario remain vested with authority to guarantee bonds with the approval of the Lieutenant Governor in Council."

He also refers to the question of higher rates of interest.

It was not until June 11th, 1920, that Sir Adam Beck replied to this letter, wherein he stated that the delay was due to the decision of the Commission to have a special report prepared on the Hydro-Electric Railways, and stated that Mr. W. S. Murray, a consulting engineer of New York, had been employed for the purpose. He intimated to the Premier that much of the information desired by him in his letter wouldl be found in Mr. Murray's report. In his letter he also referred to the Toronto, Port Credit, St. Catharines Railway, as to

which he stated reports and estimates were submitted in the year 1915, to the municipalities between Toronto and Port Credit, re the construction and operation of this section as a part of the Toronto to London Lines. By-laws were submitted in January of 1916, and for the section between Port Credit and St. Catharines in 1917 and 1919, and were passed by large majorities. He further stated:

> "Fifteen municipalities have executed the agreement with the Commission, authorising the procedure with this work and assuming the responsibility to the Railway of its operation between Port Credit and St. Catharines and have deposited with the Commission, debentures for the full amount. The Commission has issued bonds to the extent of $11,360,363, all of which have been guaranteed by the Province. A great part of the engineering work has been completed, and the final survey of these sections and the Toronto, Port Credit and St. Catharines Railway, and right of way purchased between Toronto and St. Catharines to the value of $800,000." He also made reference to the Toronto and Eastern Railway and the fact that "in May, 1919, some ten municipalities in the District passed resolutions requiring the Commission to negotiate on their behalf, for the acquiring of the properties owned by this railway, and to prepare reports on the completion of its construction and its extension to Toronto. An option on the property was obtained by the Commission; by-laws were submitted by ten municipalities from October, 1919, to January 1st, 1920, under the Hydro-Electric Railway Act, etc."
>
> As to the Hamilton, Galt, Elmira and Guelph Railways, he said: "On January 1st, 1920, By-laws under the Hydro-Electric Railway Act were submitted to fourteen out of seventeen municipalities in this district, and of these thirteen municipalities carried with large majorities, and three have still to be submitted to the electors."

He referred to the estimates in connection with the Hydro-Electric Railway from Toronto to St. Catharines, to the estimates as submitted to the municipalities in 1915, 1916, 1917, and 1919 as at $18,866,792.53 and to the difference between that sum and the then present day estimates at $22,298,635, and stated that the latter included the cost of new equipment for rolling stock, whereas the Commission's estimates as submitted to Mr. Murray were based upon using the locomotive equipment then in use on the Queenston-Chippawa Canal. He further made this statement:

> "As to the extent it is believed that the expenditures will be made by the Commission on the construction of Hydro-Electric Railways in the next year or two, the Commission has been able to obtain a credit of $1,000,000 from the Bank by placing some of its bonds as collateral, and this amount it is believed, will be sufficient for the present year in the purchasing of the right of way, the engineering and the preparation of the right of way and for commencement of operations and conditions warrant. The contemplated work for the year 1921 provided conditions remain as at present, require an expenditure from time to time of $2,500,000. It is the intention of the Commission to proceed with the work of construction of electric railways only to the extent and as rapidly as conditions, revenues, and the cost of material and labor will warrant."
>
> He further stated therein:
>
> "With reference to the negotiations of the Commission with the Dominion Government, the Commission has an option on the Toronto Eastern Railway for $706,000, for which amount the Government is prepared to accept the Bonds of the Commission for a period of 50 years at 4½ per cent.
>
> "The Commission has also received an offer from the Minister of Railways and Canals of the sale of the Toronto Suburban Railway at present operating between Toronto and Guelph and the Niagara, St. Catharines and Toronto Railway operating in the district between St. Catharines to Niagara, St. Catharines to Welland and Port Colborne, Port Dalhousie and Niagara on the Lake, for which the Minister of Railways and Canals is prepared to recommend to the Dominion Government the acceptance and payment therefor of the Commission's bonds for a period of 50 years at 4½ per cent."

It appears from the correspondence and statements recently received that on February 23rd, 1920, the Secretary of the Commission wrote the Treasurer of the Province that the debentures required had been prepared, and asked that they be endorsed as authorised by the Order-in-Council of August 8th, 1919. The Secretary also said:

> "The purchase of rights of way has been going on for some time, and the Commission would be obliged if the matter of endorsing bonds would receive early attention, so that the necessary funds may be secured through the depositing of bonds to take care of the disbursements for right of way purchase and preparation for the construction of the lines."

It also appears from said correspondence that the total amount of bonds to be issued was $11,360,363, and as already mentioned it is said to have been represented to the present Government that certain commitments had been made by the Commission, and certain advances secured by the Bank, that it was necessary that guarantee of these bonds should be duly executed in order that the Commission should be in a position to meet the obligations it had incurred.

It also appears therefrom that the Government consented to the guarantee, for the purpose of protecting the Commission against commitments already made, and it was not intended that any more bonds would be issued than were necessary for that purpose.

On various dates from March 10th, 1920, until May 20th, 1920, the Assistant Treasurer, Mr. Sproule, as authorised by the Order-in-Council, endorsed the guarantee of the Province for the issue of the bonds, and delivered them to the Hydro-Electric Commission to the extent of $1,200,000.

It further appears therefrom that at the present time (July 13th, 1921) "The obligation of the Province in respect to the Toronto, St. Catharines Railway, consists of the guarantee on its part of $11,360,363 of Hydro Radial bonds of which $10,160,363 are held by the Commission not fully executed (said to be unsigned and unsealed)" "And the remaining $1,200,000 are pledged to the Bank of Montreal for advance of $200,000. No cash advances have been made by the Province for the purpose of the railway."

Re Toronto to Port Credit Radial Railway.

The correspondence further disclosed that expenditures have been made in connection with this railway, to the amount of $683,286.74, on authority of a letter from Sir William Hearst, former Premier, "that if the Commission would obtain resolutions from the municipalities interested and request the Government to endorse and pass all amendments to the existing legislation which might be necessary to validate," etc. .. .. "that on the basis of these assurances, with the resolutions of the municipalities in its possession, Commission acquired certain rights-of-way and made other expenditures which up to Oct. 31st, 1920, amount to said sum of $683,286.74, that on that date bonds of six municipalities to the amount of $5,109,573 stood deposited with the Commission; that no bonds had been issued by the Commission neither had the Province entered into any guarantee with respect to the line." "The $683,286.74 expended by the Commission upon the line can, however, fairly be said to be part of the funds advanced by the Province to the Commission under appropriations made for the purpose of the different power systems and undertakings operated and controlled by the Commission."

Re Toronto and Eastern Railway	$ 43,946.40
St. Catharines & Niagara Falls Railway	25,984.29
Hamilton, Galt, Elmira & Guelph Railway	36,482.06
Hamilton, Brantford, Woodstock and London Railway	17,617.34
	$124,087.09

The above amounts expended by the Commission in respect of such railways, according to the letter of Mr. Clarkson, "were made out of the funds held by it for the benefit of power undertaking, and without any apparent legal authority. No bonds had been issued by the Commission in respect to such railways or guarantees given by the Province." The remainder of Mr. Clarkson's letter shows how incomplete as to necessary by-laws, etc., matters were and are. The letter contains this further statement:

"Moneys expended by the Commission in respect to valuations, have been as follows:

Niagara, St. Catharines & Toronto Railway	$1,005.27
Toronto Suburban Railway	5,604.86
Total	$6,610.13

"These expendiutures were made out of the general fund of the Commission and there would appear to be no statutory authority permitting disbursements of the same. No bonds have been issued by the Commission in the connection, neither is the Province under any liability in respect to the undertaking. In addition to the amounts mentioned, sums expended by the Commission in respect of the Hydro Radial Railway investigation amounted to October 21st, 1920, to $44,704.09, which sums, the Commission contends, are repayable by the Province to it."

It appears from a statement recently received from the Hydro-Electric Power Commission that on "Electric Railway engineering investigations, surveys, by-laws and reports, under Hydro Electric Railway Act of 1914, they have expended the following sums:

For Fiscal Period ending October 31, 1914	$42,385.47
For Fiscal Period ending October 31, 1915	45,925.18
For Fiscal Period ending October 31, 1916	38,675.66
For Fiscal Period ending October 31, 1917	37,909.76
For Fiscal Period ending October 31, 1918	9,597.29
For Fiscal Period ending October 31, 1919	47,156.48
For Fiscal Period ending October 31, 1920	68,609.86
Period November 1st, 1920 to July 2nd, 1921	4,036.41
	$294,296.11

These are not matters as to which we were called upon to make enquiry or report. It appears also that on expenditures on account of Hydro Electric Railways they have expended the following sums:—

Toronto—Port Credit Line	$ 715,413.26
Port Credit—St. Catharines Line	492,644.31
Toronto—Eastern Line	41,981.94
	$1,250,039.51
Survey Instruments and other equipment	4,201.60
Total	$1,254,241.11

It was growing out of these matters so far as they were in evidence in July, 1920, that this Commission came to be appointed.

IV RADIAL RAILWAY LEGISLATION

The question of the relationship of the Municipal Hydro Electric Radial Railways Association and the Hydro Electric Power Commission of Ontario was referred to by certain witnesses, and made the subject of comment by Mr. R. S. Robertson, in his argument. He suggested that much of the initiative and of the work done to create public opinion in support of the construction of the proposed electric railways, did not come from the municipalities concerned so much as from the Municipal Hydro Electric Radial Railways Association, and that there was an intimate association between it and the officials of the Hydro Electric Power Commission of Ontario. When public meetings were called, and public discussions taking place in connection with the proposed passing of by-laws in a particular municipality, the members of this Association and the officials of the Commission were present, speaking in favor of the project, and urging the passing of the by-laws. The Association also published literature for a like purpose. The argument was advanced, it was said, by officials of the Hydro, that in certain localities desirous of obtaining electric lighting, it was difficult, if not impossible, to extend lines to them. It was added, however, that if the railways were constructed through their locality, this

would make available cheap light. In one of the pamphlets published by the Municipal Hydro Electric Radial Railways Association, appears the following statement: "The Government guarantees the bonds, and by so doing virtually guarantees the estimates of the Commission." and the further statement: "The Hydro Electric Railway Association, composed of some 300 municipalities, after careful consideration, have no hesitation in endorsing the railway proposition, and urging the electors to give it their earnest support, because," etc.

It is suggested, on the other hand, that the whole question of the construction of the railways had its initiation with the municipalities, and that the Hydro Electric Power Commission of Ontario only took the steps they were invited to under the Legislation in existence; that it was in consequence of a request from the municipalities that they made investigation, surveys, reports, and ultimately estimates. The relationship between this unincorporated municipal organization and the Hydro Electric Power Commission appears to have been a somewhat intimate one.

Mr. C. C. Robinson said, in commencing his argument: "that the position of the Hydro Electric Power Commission in reference to its principals" was that "it acts in the matter not at all of its own motion or for any interest of its own, but solely at the instance and on behalf of the municipalities which interest themselves in the scheme. Its only interest in those projects is as representing those municipalities, and as desirous to carry out their wishes just so far as it appears economically sound and feasible to do so." He added that the case which had been presented to the Commission was "a case of the municipalities interested" and that the Hydro Electric Power Commission had "presented no independent case to this Commission, and it has called no witnesses before this Commission."

It appears to us that it is inadvisable for the officials of a Provincial Commission to take an active part in municipal elections and debates, with reference to the passing of by-laws, and particularly so where the scheme is the proposed construction of a system of electric railways, which is expected to be built by bonds of the Hydro Electric Power Commission, an endorsement of which is desired to be obtained from the Province. The Commissioners in charge of the Hydro Electric Power Commission of Ontario and their officials are apt to be thus drawn into controversial matters.

Certain of the witnesses, called pointed attention to the wide and enlarging scope of the powers entrusted to the Commission by the Hydro Electric Power Legislation, and the Electric Railway Legislation which has been passed. For example, by the Act of 1918, 8 George V, ch. 14, sec. 4: "The Power Commission Act is amended by adding thereto the following sections:

"6 (*b*) All special funds and the income and revenue thereon, and all moneys and revenue which now are or shall come into the hands of the Commission, whether as agent, trustee, owner or otherwise, shall form one fund to be called 'general fund,' and the Commission shall have power from time to time to make any and all expenditures out of the said fund for the purposes and objects of the Commission *without regard to the special trust or purposes* under which the same or any part thereof may come to its hands, and the Commission shall account for and from time to time pay out of the said funds, all moneys for which it shall be so accountable."

In the Hydro Electric Railway Act of 1916, ch. 37, there appears the following:

"Sec. 8. Notwithstanding anything in The Municipal Act contained, debentures issued or purporting to be issued by a municipal corporation under the authority of the Hydro Electric Railway Act, 1914, for the purpose of carrying out any contract entered into with the Commission under the authority of the said Act, shall not be included in ascertaining the limit of the borrowing powers of the corporation as prescribed by The Municipal Act."

By the Statute Law Amendment Act of 1917, ch. 27, sec. 32, said section 8 was amended by inserting after the words "The Municipal Act" in the first line, the words "or in any other general or special Act," by adding at the end of the said section "or by any other general or special Act."

These witnesses also directed the attention of the Commission to the terms of the agreements entered into between the municipalities who are interested in the construction of the proposed system of railways, and the Hydro Electric Power Commission.

By these terms a particular municipality cannot enter into an agreement with, or give a license to any railway or transportation company, except with the consent of the Commission. The Commission is empowered "to regulate and fix the fares and tolls for all classes of service," "to pay over annually to the corporations, *if deemed advisable by the Commission* in the interest of the undertaking, any surplus that may remain after providing for the items above mentioned," etc.

"In the event of the revenue derived from the operation of the undertaking being insufficient in any way to meet the operating expenses (including electrical power) the cost of administration and the annual charges for interest and sinking funds on the bonds, and for the renewal of any works belonging in whole or in part to the railway, such deficit shall be paid to the Commission by the corporations upon demand of, and in *proportion adjusted* by the Commission."

"Every railway and all the works, property and effects held and used in connection therewith, constructed, acquired, operated and maintained by the Commission under this agreement and the said Act, *shall be vested* in the Commission on behalf of the corporations, but the Commission shall be entitled to a lien upon the same for all moneys expended by the Commission under this agreement, and not repaid."

"In the event of any difference between the corporations, the Commission may, upon application, fix a time and place to hear all representations that may be made by the parties, and the Commission shall adjust such differences, *and such adjustment shall be final.* The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the "Act Respecting Inquiries Concerning Public Matters."

While questions of policy and legislation are, as we are well aware, for the Government and the Legislature, we are, by the terms of our Commission requested or invited to make suggestions and recommendations in connection with or arising out of any of the subjects indicated as in our opinion may appear desirable.

The Legislation in question has been adopted by the Legislative Assembly, and the form of the agreement, to which reference has been made, has statutory endorsation. We would, however, suggest that it may be well to review and reconsider the legislation and the agreement in the light of the suggestions or criticisms thus made.

There is another matter, which we have raised in our own minds with reference to the position of the Hydro Electric Power Commission, and its relation to the municipalities under the Electric Railway Legislation and agreements already referred to. It is the many different positions, duties and obligations which the Commission may be called upon to perform and discharge. It is, as a public Commission of the Province, a trustee thereof for the development and sale of power, and in connection with the expenditures for construction and operation incidental thereto, and the moneys received and expended in connection therewith. It is, in the case for example of the Sandwich, Windsor and Amherstberg Railway (and it will be for the municipalities interested, if this system of electric railways is constructed and operated) the trustee for these municipalities in connection with the construction and operation. It will be the vendor of power for the Power Commission, and the purchaser from itself in that capacity, of power as the agent and manager of the Electric Railway System for the municipalities concerned. It will be the trustee of the municipalities for the physical property constituting the electric railway system. It will be the arbiter between the municipalities in case of differences between them and without appeal to any other tribunal in case of difference. It is the investigator and advisor of the municipalities in connection with the proposed system of electric railways and the framer of the estimates connected therewith. It is on its report and endorsation that it approaches the Government or is requested to do so by the municipalities concerned, with a view to obtaining endorsation by the Province of its bonds.

It does seem to us that for the members of any Commission to play all these important, differing and possibly conflicting parts is difficult, if not impossible adequately to perform. It would appear to us that it tends to divert the full attention and consideration of the Commission from the great work of developing and selling power. It is prone, as matters have thus far gone, to lead the members of the Commission or other officials, to be drawn into municipal

difficulties and differences. We suggest that these questions may well be deemed matters for consideration by the Government and Legislature.

There is a further question to which attention may also be again directed, and which was raised by Mr. Clarkson in his report of March 19th, 1920 at p. 24 in a paragraph already quoted, but here repeated:—

"Moneys raised by the Province for the purpose of any Department of the Government or for the Commission cannot, under the Audit Act, be paid over without a vote of the Legislature, and when so voted they are strictly limited in amount. Under the Acts regulating its powers the Commission has authority to issue bonds and the Treasurer of the Province is empowered, subject to the approval of the Lieutenant-Governor in Council, to guarantee the same, but no limitations are imposed in the Acts with respect to the aggregate amount of bonds which the Commission may issue or the Treasurer of the Province guarantee, with the approval of the Lieutenant-Governor in Council. As the liability of the Province is the same to all intents and purposes whether it raises moneys direct or guarantees bonds of any undertaking, in that it must see that payment of all borrowings or guaranteed bonds be made, it is a matter worthy to be considered as to whether the Legislature should have direct control over all the finances of the Province or the Treasurer of Ontario remain vested with authority to guarantee bonds with the approval of the Lieutenant-Governor in Council."

We have, in the matter under investigation, a project involving the possible and probable expenditure of $45,000,000. Under the existing legislation the Treasurer of the Province is apparently empowered under the law, subject to the approval of the Lieutenant-Governor in Council, to guarantee the same, without reference to the Legislature.

V. GENERAL DESCRIPTION OF PROJECT

TORONTO EASTERN:—Mileage 43.83—Double Track 6.0 miles.

The Eastern Terminus of this line is at Bowmanville and the proposed road extends from that town westerly through the Township of Darlington and the Towns of Oshawa, Whitby and Pickering; the steel is laid as far West as Whitby, although the grading was completed to Pickering. The location adopted by the Hydro Commission from Pickering westerly parallels, in a general way, the Kingston Road to a point where it crosses the Grand Trunk, and is located about half way between the original location of the Toronto Eastern and the Kingston Road. From the crossing of the Kingston Road the line extends westerly paralleling the Grand Trunk to the crossing of the branch line from Scarborough Junction to Markham and Stouffville. The proposed line then diverges slightly, roughly paralleling St. Clair Avenue to the crossing over the East Branch of the Don River, and from that point southerly through the City of Toronto to Ashbridge's Bay over the right-of-way provided by the Harbour Commission to the foot of Bay or York Streets.

TORONTO, PORT CREDIT & ST. CATHARINES LINE

Mileage 72.15; Double Track for 20.0 miles.

This line extends westerly from the foot of Bay or York Streets across the Harbour Commission's property and through the Exhibition Grounds to Sunnyside and thence westerly paralleling the Grand Trunk Railway from Toronto to Clarkson. From Clarkson the line swings slightly south away from the G.T.R. to the centre of Oakville where it connects with the Hamilton Radial Railway line. From Oakville the proposed line will be over the Hamilton Radial Railway to Burlington, or will parallel it if the acquisition of this portion of the Hamilton Radial System does not go through. From East of Burlington the proposed line extends westerly through the north part of Burlington and just south of Aldershot entering the City of Hamilton East of the Valley Inn from which point it parallels the Grand Trunk right-of-way to James Street in Hamilton. One location is through Hamilton on the Grand Trunk right-of-way, and the other location to the East of that and entirely independent through the city limits. From the east of the City limits of Hamilton the line extends easterly crossing the Grand Trunk near Stoney Creek and parallels that road through to Grimsby where it diverges to the East and closely parallels the main highway to a point about 1½ miles west of the Grand Trunk Station at St. Catharines where a junction is made with the present Niagara, St. Catharines and Toronto Railway which it is proposed to use as a connecting link with the Frontier at Niagara Falls.

NIAGARA CENTRAL DIVISION:—Mileage 61.7

This is an existing road consisting of branches radiating from St. Catharines. One branch runs to Port Dalhousie, one to Niagara-on-the-Lake, one to Niagara Falls passing through Merritton and Thorold and one to Welland and Port Colborne. This System is at present owned by the Dominion Government and operated by the Canadian National Railways.

HAMILTON-GALT-ELMIRA DIVISION

(or Wentworth-Waterloo Division.) Mileage 82.85

This line commences at the junction with the main line between Toronto and St. Catharines in the vicinity of Des Jardines Canal, Hamilton, and extends Westerly passing beneath the cemetery and the T. H. & B. Railway. The line then extends westerly up Dundas Valley to Copetown and thence by the villages of Brockton and Sheffield to Galt where a connection with the Grand Trunk Railway, called the Hespeler and Guelph Branch, is made. It is proposed to obtain running rights with a cross town connection to the Galt-Kitchener-Elmira Branch of the Grand Trunk Railway, which it is proposed to acquire. Below the Preston yard of the Grand Trunk Railway a connection is proposed to link up Galt, Preston and Kitchener to Guelph by obtaining running rights over the Grand Trunk Railway. At Guelph a connection is proposed from a point near Guelph Junction to the end of the line on Waterloo Road of the Guelph Radial Railway so as to get a central passenger entrance to the centre of Guelph and a freight connection with the Toronto Suburban.

TORONTO SUBURBAN:—Mileage 64.5

It is proposed to acquire the existing line of the Toronto Suburban extending westerly from Lambton to the City of Guelph, including also the line extending from Weston to Woodbridge. It is expected that the part of this line within the City of Toronto will be turned over to the City Transportation Commission for operation. It is also intended to connect this line with the Toronto-Port Credit-St. Catharines line, near Sunnyside, running from Lambton via the old Belt Line Railway.

The Toronto Suburban is at present owned by the Dominion Government and operated by the Canadian National Railways.

A more detailed description of the proposed System was prepared and handed to us by Mr. Fairlie, of the Hydro Electric Power Commission. This will be found in Appendix 12.

VI. OUTSTANDING FEATURES OF THE PROPOSED PROJECT

The gradual evolution of the project from the early years until even the concluding weeks of the inquiry, has introduced and developed various outstanding features. Some of these, brought to attention in the early periods of voting by the municipalities during the war, gave promise at that time of some advantage, especially to those municipalities which considered themselves disadvantageously situated or unfavourably dealt with by the then existing transportation systems. In the latter respects, it is to be noted that the situation has now very considerably changed by the acquisition of the Grand Trunk Railway and the formation of the Canadian National Railways by the Dominion Government. In certain other respects, some of the outstanding advantageous features claimed for the proposed system do not now appear to present the insistent appeal of necessity or loom as large as they did several years ago.

(a) Population and Territory

As already indicated, the area proposed to be served by the projected system is not only the most populous or densest in Ontario, but to some extent surrounds and is tributary to the capital city, with its population of over a half million. It is thus natural that the influence of the city, with respect to the project of this new transportation, should be very great. Its influence on the existing transportation systems has developed various features which have and will continue to be prominent factors in transportation, especially with the publicly owned and operated steam railways recently acquired by the Dominion Government.

It is a curious fact in this connection, however, that there has, as yet, been no development of suburban service by the steam roads in Toronto, and this has doubtless had a strong influence towards encouraging the project of Hydro Radials.

Out in the Province, however, and especially in the area concerned there is a very extensive net work of steam and electric railways, and it is doubtful if an area of equal extent, density of population or business and industrial activity either in Canada or the United States (except perhaps around the exceedingly large centres) is better served in this respect. The total mileage of the existing steam railway routes within the area, shown on the accompanying map, is 800 miles of which the double trackage is about 200 miles. That of the existing electric railways in the same manner is about 250 route miles. The total investment of the steam roads in this region might reach some such amount as $50,000,000 to $60,000,000 of which the Government owned has perhaps about $30,000,000 to $35,000 000. That of the existing electric roads is about $22,000,000.

In view of this large extent of railway service throughout the region (see map accompanying this report), it is for very serious consideration whether and how great a demand there is for additional transportation, even with the advantageous features claimed for this project, and further, if built, to what extent a newly constructed electric system would attract lucrative business and maintain itself in competition with these railways, especially as against the existing Government publicly owned system.

(b) Type Proposed: Suburban and Interurban Passenger With Freight Combined

The type of electric railway proposed under the scheme is a counterpart of a high-class steam road operating between large cities. It is proposed to combine both the (1) Main interurban passenger business with the (2) shorter suburban and in some instances (3) local city services all for passenger transportation, together with (4) freight business doing heavy carload service along with (5) the lighter "less than carload) business and (6) express service. These additional classes are proposed to be superimposed upon an interurban railway, thus loading it to a capacity limited only by the practical operating conditions of its various lines.

The System is thus intended for the development of a rapid frequent service for both passengers and freight of a general and universal kind heretofore unattempted by any electric railway on this continent, or to use the expressions employed by Mr. Arnold in his testimony (Page 9417) :—"This road is entirely different from any other kind of road I know of anywhere in the States"—"Such a combination as I have never yet seen anywhere else."

The proposed system as thus outlined is obviously an experiment, there is nothing like it anywhere in existence by which wholly to judge of its financial possibilities, or its practical operation. It will be new in type and new in the field, in close competition with long established railways which have developed slowly through years of constructive operation. It will be dependent solely upon its new features with which to wrest business from these other lines or create new business of its own.

(c) A Publicly Owned and Operated Road

It is to have another distinct feature, new in electric interurban railways in that it is to be constructed and operated under co-operative public ownership. In this respect the proposed railway system is designed to be on similar lines to the publicly owned electric power system which has been operated with success since its early days when it too was an experiment.

It is here suggested for fuller consideration whether there may not be a distinct line of cleavage on public utilities between the development and sale of electric power from a great natural source of supply and the building and operation of electric railways which are entering a purely competitive field.

It is questionable whether the experiment of electric interurban or radial railways will be the same kind of experiment and have the same kind of success as has that of electric power and transmission. In the latter case the field was almost entirely new and the Power Commission by its ownership of generating stations and transmission lines and by making exclusive contracts with the municipalities for distribution, occupied a position which was largely non-competitive, and, as time has gone on is now almost entirely so. On the other hand, as has already been pointed out, the new electric railway lines will parallel existing lines and although proposing to offer frequent and fast service will nevertheless be in a large field of other transportation systems and practically every passenger and every pound of freight would be competitive business. The competive nature of this business was recognized by Mr. Arnold in his

evidence (Page 9418) when, speaking of the feature of the road he said, "this would be a public road, the public would be interested in it and would probably be more friendly to it" and again "They would ride on it I believe more frequently and ship their freight over it more frequently at the same rate than they would over a private road."

It may be unnecessary to point out that however public-spirited citizens may be, competition depends more upon circumstances of time and place and pocket and it is stated by experienced railway operating men that it is difficult to conceive anything more competitive than the railway business providing there is more than one serving road. Every passenger will choose according to fares, service and accommodation on which line he will travel and every shipper, if the decision lies with him, will route his freight according to his preferences at the time and as is well known, these preferences are highly varied and changeable by small circumstances. The only business upon which a railway can absolutely depend is traffic to points not served by competitors.

On general considerations we believe that, apart from the more frequent passenger service and in some cases faster light freight service expected to be performed by these electric railways, the special virtue of their being publicly owned and operated in so far as revenue getting is concerned, should not be unduly emphasised.

(d) Exceptionally High Standard and Cost of Construction

Perhaps one of the most outstanding features of the proposed system of electric railways lies in the high standard of construction and cost which it is intended to adopt in their construction.

It is proposed to construct the new lines on the standard of heavy permanent steam road construction with steel rails 80 lbs. to the yard, with very heavy bridges, low grades, easy curves and all the attendant expense that these involve to attain highest speeds, at sixty miles per hour, for passenger trains and to haul long, heavy freight trains with the most powerful electric locomotive equipment obtainable for the purpose. There being expected an ample supply of power from Niagara Falls all electric transmission and station equipment is provided for on the most generous plan. The type of cars and their accommodation provided for in the estimates, are expected to be the last word in design and quality. The terminal construction in the large towns and cities, as for instance in Toronto, is to be of the highest standard of excellence comparable with or even surpassing that of long established steam roads operating in the same localities, providing for grade separation with bridges and deep cuttings of highly expensive character.

It is to be pointed out that commendable though the best may be, there lies somewhere a line beyond which it may not be economical to go having in mind the circumstances surrounding the project as to its prospects, the financial conditions of the time and the possibilities of subsequent development along progressive lines. An example of this is familiar to us in the case of the construction of the Grand Trunk Pacific which, it is now universally acknowledged, was "over constructed" for the times and the prospective business.

(e) Frequency of Service and High Speed

The proposed frequency of passenger service which it is intended to inaugurate is a feature of undoubted advantage in a system of this nature especially in competition with steam roads in suburban and interurban business if it is possible to secure it in practice. It is on this basis that the project expects to attract passenger business. On some of the proposed divisions this frequency is expected to result in immediate business owing to the infrequent and in some respects alleged inadequate steam service now in operation. On through runs such as Toronto to Hamilton or Hamilton to St. Catharines the competition will be keener at certain times of the day according to the schedules now in force on the steam roads. For intermediate stops and suburban services the advantages will lie with the frequent electric service especially if the steam roads still refrain from putting on suburban trains as for instance out from Toronto. Whether the electric passenger service is given in single cars or multiple unit trains, frequency will still be the controlling factor, the additional accommodation being provided only to adjust the service to the riding demand. Operating experts point out that this form of frequency and elasticity of service is one of the characteristics of electric railway operation.

Much is claimed in the project for the feature of high speed which it is expected will prove an attraction in securing business. In very large metropolitan cities like New York and Chicago speed in radial and interurban electric lines) undoubtedly is an attractive feature in time saving and in competition with steam suburban lines. The tendency of to-day, especially in large cities, is fast and faster transportation but it appears to be most popular, and probably necessary, where in regions surrounding such very large cities the "commuter radius" of the daily riding habit in to the city is from 40 to 50 miles and it appears that a ride of about an hour and a quarter or a half is the economical limit for such daily riding to business. On the very fast interurban line, The Chicago and North Shore, to Milwaukee, the first hour's run of the limited train with nine stops carries one out only 21 miles from the terminus in Chicago over the elevated and private right-of-way route. The practical limit of the large commutation suburban business on this line is at 35 miles which distance the fast limited trains make in one hour and twenty-five minutes, which is at the rate of 24 miles per hour.

No such problem exists around Toronto where the size of the city and its probable growth and business of the near future will not, for a considerable time, demand a suburban riding radius of more than say 20 miles or an hour at the outside (at moderate speed).

Speed in interurban riding is more necessary if the electric road is to compete successfully with the steam road, hence it is proposed to provide for speeds up to 60 miles per hour and a schedule speed on limited trains including only a few stops, of about forty miles per hour. For instance, it is proposed to run from Toronto to Hamilton in one hour; this is faster than the present steam express train speed and is only five minutes slower than the fastest steam trains did the distance before the war. It appears to be proposed also to run from Toronto to St. Catharines with the fastest trains, 72 miles, in one hour and forty minutes or at the average rate of 41 miles per hour including stops. The run of 86 miles from Chicago to Milwaukee is made by the limited electric trains in two hours and 35 minutes or at the rate of 35 miles per hour. The "Highlander" train from Indianapolis to Terre Haute, one of the fastest electric runs on the continent, does the distance of 72 miles in two hours and five minutes or at the rate of 34.5 miles per hour. The high speed Buffalo to Niagara Falls line runs the 18 miles, outside of Buffalo, at about 30 miles per hour. The London & Port Stanley fast trains run London to St. Thomas, 16 miles, at 24 miles per hour.

This matter of speed then, raises the direct question of competition and it is for consideration whether for the longer runs it is worth building and operating such a very high class electric system to compete with the fastest steam express trains and at such faster rates say than Chicago and North Shore, or the Buffalo-Niagara Falls new fast line, and whether the luxury of the extra speed demanded is worth the greatly increased cost, keeping always in mind the preference that undoubtedly exists for electric over steam transportation for cleanliness, frequency and maintenance of time schedules.

In freight service it is claimed that the proposed system will not only handle carload freight more expeditiously but will so far beat the present steam road services in less than carload lots that it will approximate to an express service—in other words give an express service at freight rates. It was brought out in evidence that many vexatious delays occurred on the steam railways in handling local freight of this nature and, while in most cases brought to our attention, the extreme delays were unexplainable, it would seem that such delays were most likely occasioned in passing through the yards at large terminals. These difficulties are proposed to be removed and they doubtless can be to some extent by an electric road having more elasticity than a steam road in its operation. In ordinary despatch or express freight there is no doubt that the electric interurban freight operation will be advantageous compared with steam. With the utmost attention to details and to arrangement of freight operation on the shorter runs, it is to be expected too that the electric interurban and radial railway will provide a somewhat faster "less than carload" local freight service than the steam railway does now, but only on the condition that terminal deliveries are very much improved. It is likely, however, that with a large volume of such business, when details of handling become more complex especially when mixing freight operation with passenger business on the longer hauls, the tendency to delay will greatly increase not only on the lines themselves but in the yards and terminals.

(f) Terminal Advantages and Unique Toronto Situation

The Hydro Radial System as at present proposed, has what may be called three terminals and one terminal group. The three terminals are (1) Toronto (2) Hamilton and (3) Niagara Falls; the terminal group is comprised of Galt, Kitchener, Waterloo, etc.

Toronto being the metropolis of the system, forms of course, the most important terminal and by reason of its size, position and influence would, as has already been stated, be the greatest governing factor in it.

Hamilton being an intermediate terminal on account rather of its size and industrial nature, combines also the element of a junction point by reason of its location. As a terminal, however, its influence and importance is to be measured by the passenger business which it will contribute as a populous city and by the freight business which the system will be able to attract by its location, along with the steam roads, in or near the industrial quarter. The passenger business will probably be limited by the inconvenient location of the station distant from the civic centre and the freight business will be limited by the competition of the steam roads already long established in the district.

The Niagara Frontier is apparently expected to form a valuable terminal in providing connection with the American steam lines terminating or connecting at Buffalo or Niagara Falls. In some respects the Niagara, St. Catharines and Toronto Railway with its 62 miles of local and interurban lines may be considered to be a terminal group or system connecting as it already does with the Grand Trunk, the Toronto, Hamilton and Buffalo, the Michigan Central and the Wabash Railways. This railway has been exchanging most of its freight with the T. H. & B. at Welland but now being Dominion owned will more naturally work with the Grand Trunk delivering at the points of contact. In incorporating this system with the Radials it is proposed and expected that this local delivery would be discontinued and that freight originating on the N. St. C. & T. system for distant destinations will be hauled over the Hydro Radial System as far as possible before delivery to the Canadian National Railways at the outlying contact points (e.g. Kitchener, Toronto, Bowmanville). The practical working out of such a plan would have to lie in the hand of traffic experts to arrange but the Hon. Dr. Reid, Dominion Minister of Railways and Canals, in his testimony said that reciprocation would be arranged whereby interchange of freight would occurr, each system hauling as far as it could on its own lines, once it was in its possession, to get it to its destination in either direction.

As for the connection to the American side at the Niagara Frontier it is proposed to secure a working arrangement with some American steam road which would hand over to the Hydro Radials its freight destined for Canada, crossing on existing bridges if possible and if not, on one to be built. It is expected from this that considerable through coal business might be developed. No definite plans were put forward or brought out in evidence as to how this would be accomplished.

The terminal group of industrial cities and towns represented by Galt, Kitchener and Waterloo are considered to have attractive possibilities productive of considerable passenger and freight revenue. This expectation is in spite of the fact that both steam and electric roads now interconnect all these towns and, with the exception of the short distance Galt to Hamilton, provide more or less frequent and direct service to the adjoining towns and cities and other parts of the province. It must be borne in mind that the existing steam roads, having developed during a long period of years, are thoroughly established in all these towns with spurs and private sidings connecting to all the principal freight revenue producing industries. One of the reasons assigned for the interurban passenger expectations within the Galt-Kitchener group is the present alleged inadequate passenger service of the steam roads and this appears to have actuated the proposal to (1) take over and electrify the Grand Trunk Galt-Elmira branch and to (2) seek operating and running rights over the Galt-Hespeler-Guelph branch of the same railway which also it is proposed to electrify. All of these arrangements are dependent upon the Canadian National, Grand Trunk Railway agreeing to such proposals and it has not yet been brought out in evidence as to how this would be accomplished or what restrictions if any, the Grand Trunk would impose to safeguard its existing business, especially of freight, in these large industrial centres in which it has been so many years established.

The Terminal situation in Toronto is unique in various respects Apart from being a very large city having extensive industrial activities it is a distributing and sorting centre for freight.

The Grand Trunk and the Canadian Pacific Railways especially have large freight yards and in addition to their through business do a large local freight business which has been built up after a long period of operation, the Grand Trunk for over sixty and the Canadian Pacific for over thirty years. The G. T. R. now has 298 private and 43 public sidings and the C. P. R. 230 private and 43 public sidings (Mr. Watt). The Canadian Northern has been in operation only a comparatively few years and has but a small freight business. The industrial portions of the city reached and served by these railways lie partly along the Harbour front and partly in the outskirts, east and west of the city, the latter locality being now well developed.

The Hydro Radial plans provide for running across the City along the Harbour front which will provide for the entry of passengers to the central portion of the City Front and access for freight purposes to the steam railway yards, the Harbour and industrial portion along the front and in the Harbour area. This is unique in its provision for an uninterrupted, direct and convenient entrance to and across the city from the boundary at the Humber to the Woodbine. To get such a direct and advantageous entrance into and across a large city is an ideal which all promoters and operators of interurban transportation endeavour to attain and indeed nearly all the expert operating men who came as witnesses emphasised the great advantage of this feature of the proposed project. Various details and modifications were presented and discussed arising from the Hydro Commissions proposals as to the location of a Terminal Station, transfer of passengers, co-operation with City Street Railway System, co-operation of freight handling with the Harbour Commission, etc., but the outstanding feature of the direct private right-of-way leading into the City still stands as of great value possibly as the most valuable contained within the Hydro Radial proposals.

With respect to the freight question, however, the advantage gained by securing such a favourable entrance and route may not be sufficient to ensure the revenue-getting expectations of the Hydro Radials even though passing through the industrial region because practically all these industries are now supplied with private sidings to either the G. T. R. or C. P. R., who by their advantages in long haul business would severely compete with a new comer. As for new industries to be located on the Harbour area, the Harbour Commission proposes to put in its own sidings and adjust connections to industries on a rental basis with access by all railways without favour.

As to the passenger Terminal in Toronto the original proposal presented to the Commission, by the Hydro, was for a station at the foot of Bay Street, near the Harbour Commission's office. It was early recognized, during the inquiry, that this was insufficient in itself and proposals were put forward for loop connection and transfer to the city system and later Mr. Arnold proposed a subway loop scheme with a terminal near the City Hall. The uncertainty of the Viaduct project has left this matter very much in the air and the whole problem now seems to be one for co-ordination with it and the plans of the Civic Transportation Commission.

(*g*) Cheap Power Costs.

Obviously the advantage of cheap electric power within the area of the Hydro Radial project is a consideration. Compared with certain electric railways in the United States which require to be operated with steam generated electricity, the advantage lies with Ontario with its cheap power. It is to be noted, however, that there is a considerable divergence in the prices paid by various roads in the United States depending upon their location and the price of coal, etc. The evidence has disclosed, however, that taking, in general, the largest and most favorably situated roads and ones that in point of business have been at times used to compare with this project, the power costs are such that they would generally be cut from a third to a half if the Hydro prices obtainable in Ontario were applied. As various witnesses have shown that the power costs from steam lie between 5 and 9 cents per car mile in the car operating costs this means that the saving by using Hydro power in this area will be not more than about two to three cents per car mile, or say 7% of the car operating costs, thus indicating that the factor of their cheaper power, while important, is not so vital as might at first appear.

(*h*) Combination of Power Supply With Railway.

It has been brought out in evidence that it has been represented at various times, especially in the earlier days of the voting by the municipalities, that new Hydro power supply or cheaper rates for its supply, would follow the construction and operation of the Hydro Radials in certain

localities. This appears to have been urged by Hydro representatives as the outcome or as being possible by the construction of the proposed railways. In several instances this may be possible at the fringe of the area supplied by Niagara Power or at points lying between two power systems as, for instance, at Pickering, but it must be borne in mind, on the other hand, that practically the whole area concerned is now fully supplied with Hydro Power from either Niagara or other sources and this advantage is thus only very local.

VII. INCOMPLETE FEATURES OF THE PROJECT AS PROPOSED

An examination of the description, presented by Mr. Fairlie of the Hydro Electric Power Commission and as described in the evidence, discloses certain incomplete features the extent and significance of which, while naturally and necessarily of great importance in considering the system as a whole, could not, for that reason, be adequately weighed. They are as follows:

(1) The Dominion Government gave an option on the Toronto Eastern Section under construction at that time (1920) by the Canadian National Railway. In this option, no arrangement is shown for interchange of freight at Bowmanville, or with the Oshawa Street Railway System. Dr. Reid, however, in his testimony stated "that was a very important point and there was no difference of opinion between Sir Adam and myself, and those that were there—there was no difference of opinion that we would inter-change the traffic, because the railways were important feeders of the Canadian National, and not only Sir Adam but myself—we both agreed that the freight would be interchangeable." Later he said, "The Hydro Electric Commission, through Sir Adam Beck, wanted those railways, and as far as I am concerned, that is what I was considering at the time, and so long as we had an arrangement where we had the inter-changing of freight, we would get the advantages you are just referring to." "'I did not go into it any further then, I said. 'That would be a matter that would have to be gone into by the railway officials and Sir Adam Beck, if the matter was finally closed.'"

(2) The option also covers the purchase of the Niagara, St. Catharines & Toronto Railway, operating in the Niagara Peninsula, and the Toronto Suburban Railway, between Toronto and Guelph. Here again no arrangement is shown for interchange of freight with either of these roads.

(3) No agreement has been entered into with the Toronto Harbour Board, in connection with the right-of-way for the proposed radials across the Harbour Front. Neither has any arrangement been made for interchange with other roads, or terminal facilities into the different factories on the Harbour property.

(4) No arrangement has been made with the City of Toronto as to division of fares for suburban traffic.

(5) No arrangement, or agreement, has been made to secure the electric lines, belonging to the Dominion Power and Transmission Company, from Oakville to Burlington, although it is apparently intended to take over this section and operate in conjunction with the proposed line between Toronto and Hamilton.

(6) No agreement has been made with the Grand Trunk Railway in connection with an entrance into and passing through the City of Hamilton, although it is proposed to utilize its right-of-way for trackage from the westerly to the easterly boundary of the city

(7) No agreement has been made with reference to the proposed acquisition of the branch of the Grand Trunk Railway, between Galt and Elmira, now forming part of the National Railway System, nor has any agreement been entered into for the interchange of freight or passenger business.

(8) No agreement has been made with reference to running rights over the tracks of that part of the Grand Trunk, between Preston and Guelph

(9) No agreement has been made with the Canadian Pacific Railway, or Toronto, Hamilton and Buffalo Railway, for interchange of freight over their lines where coming in contact with the Hydro Radial System.

(10) No agreement has been arranged for with American roads providing for the carrying of freight beyond the Canadian border or vice versa.

It may properly be suggested that it was impossible to effect such arrangements or enter into such agreements in advance. This may be conceded, we are merely pointing out the many incomplete features in the project.

VIII. COMPARISON WITH EXISTING RAILWAYS.

In the consideration of the economic feasibility of a transportation project like that of the Hydro Radials conjecture naturally arises as to how it would operate, compete and succeed in the territory concerned along side of the existing roads in the region and under the conditions it would meet or have imposed upon it.

Given what appears to be an advantageous, even attractive territory of a million population and very considerable industrial activity already served with steam and electric railways, this consideration of the probable success of the project readily resolves into an examination of (1) the performance of the existing roads within or near the region under local conditions and (2) the performance of similar or comparable roads elsewhere from which useful deductions can be made.

The most reasonable measure or criterion of the amount of business to be expected by the new system is to be derived from a study and comparison with the business already being done by existing railways within the region.

The performance of existing roads whether within the area or elsewhere must be considered in the light of their history, the period of their establishment and the connections and other facilities which they have acquired in that time and the special features which may affect their economical performance.

(a) Steam Railways Within the Region.

The comparison and analysis of the passenger and freight business now being done by the steam roads which form the main artery of transportation is the first logical step. These roads extending from Bowmanville to Niagara Falls, a distance of 130 miles, comprise the Grand Trunk, double tracked throughout the distance; the Canadian Pacific, single track Bowmanville to Toronto, and also using the Grand Trunk tracks from Toronto to Hamilton; the Canadian National, single track Bowmanville to Toronto; and the Toronto, Hamilton and Buffalo from Hamilton to Welland, double tracked about a third of the distance. To this might be added, in order to complete the system, the existing electric railway system, the Niagara, St. Catharines and Toronto in the Niagara Peninsula until lately a feeder to the T., H. & B. (and C. P. R.) and now co-operating more especially with the G. T. R.

The portions of the proposed Hydro Radial project which naturally fall under comparison in this main route, comprise the proposed Toronto Eastern, the Toronto and St. Catharines and the Niagara, St. Catharines and Toronto Divisions.

As to passenger revenue, the evidence and exhibits which have been put in by the foregoing steam roads and the N. St. C. & T. electric road show an aggregate local passenger business, exclusive of all through traffic, of nearly two and a half million dollars revenue, in 1920, being carried on a total single track mileage of over 460 miles, of which 260 miles is contained in the 130-mile (main) double track G. T. R. route. For the purposes of comparison the three Hydro Radial Divisions (inclusive of the whole N. St. C. & T. system) as laid down in Mr. Arnold's proposals comprise the same over all distance of 130 miles (Bowmanville to Niagara Falls) but with 29 miles of double track and the various branches in the Niagara Peninsula and aggregate about 207 miles of single track. Over this system—less than half the former in trackage—the Hydro Radials, according to Mr. Arnold's report, expect to do a similar local interurban passenger business in 1925 amounting to nearly two and a quarter million dollars revenue; this is after deducting all suburban business.

So also with the freight traffic a similar comparison over the same lines and trackages can be made omitting all through freight business and considering only local business with carload and less than carload lots. This aggregate revenue of the steam roads in 1920 was slightly over one million dollars whilst that expected by Hydro Radials in 1925, according to Mr. Arnold's report will amount to about Eight Hundred and Thirty Thousand Dollars.

Using this criterion for comparison it is to be noted that the Hydro Radials alone on the main route between Bowmanville and Niagara Falls expect in 1925 to secure a revenue in local passenger business amounting to about 93% and in local freight business of about 78% of all that similar local business done by the several steam lines combined, now operating through the same region, with an aggregate trackage over twice as great as the Hydro Radials will have. And considering the combinations of both passenger and freight business the Hydro Radials alone expect to do about 88% as much as the steam roads combined under the same conditions (according to Mr. Arnold's figures).

On the unit passenger revenue per mile from Bowmanville to Niagara Frontier the combined steam roads (G. T. R., C. N. R., C. P. R., T., H. & B.) together with the N. St. C. & T. now average about $18,300 on local business assuming a route of 130 miles, while the single track Hydro Radial line (including the Niagara System) but excluding suburban business expect to earn $17,000 per mile in 1925 on the same kind of local business and for the same 130 miles. If, however, the Grand Trunk alone is concerned and using their local passenger returns for the 130 miles, Bowmanville to Niagara Falls (double tracked) for 1920 (with the last two months projected from the figures in Exhibit 110) the revenue becomes only about $7,000 per mile and it thus appears that the Hydro Radials expect to get a local interurban passenger revenue in 1925 of nearly two and a half times that of the Grand Trunk Railway which it immediately parallels.

These expectations put forward by the Hydro Radial project in respect to its main trunk route appear very large. It is recognized that there may be some localities where similar performances are approached in passenger business alone, notably in the local business between Detroit and Toledo, 54 miles, but, on this line the combined population of the 54-mile route is twice that of the 130-mile Ontario route with about the same steam railway accommodation so far as passengers are concerned.

The T., H. & B. railway between Hamilton and Welland, 38 miles, one-third double tracked, which forms a connecting link from the American roads to Hamilton (C. P. R.) and which has a dense traffic had passenger earnings (including through passengers as well) of $14,200 per mile, in 1919, and $15,600 in 1920.

The purely interurban non-stop C. P. R. business, the greatest between Toronto and Hamilton, over the G. T. R. lines, had a passenger revenue in 1920 of about $8,000 per mile.

The entire T., H. & B. System, comprising 100 miles, and competing directly with the proposed Hydro Radials with contract at Hamilton and Welland and indirectly through Brantford and Waterford, had a passenger revenue in 1920 of $6,450 per mile.

With respect to the purely local freight business these comparisons are equally striking. The proposed Hydro Radials on the main route between Bowmanville and Niagara Falls (including the N. St. C. & T.) expect to obtain a revenue in 1925 (according to Mr. Arnold's report) of about $6,400 per mile whereas the Grand Trunk on the same 130 mile route (double tracked) actually obtained in 1920 (as before from Exhibit 110 extended) only about $6,000 per mile running closely parallel. If all the steam roads stretching between Bowmanville and the Niagara Frontier, including the T. H. & B. and the N. St. C. & T. are considered as a trunk route, 130 miles long, irrespective of the number of tracks, the combined revenue for 1920 reached only about $8,000 per mile for the purely loal freight.

On the T. H. & B. as a whole, and considering not only the local passenger and freight business but the through passenger and freight as well, its strategic position is such as to place it at the head of the revenue earning steam railways not only in the region but in Ontario. The passenger earnings on all business, local and through, over its 100 miles in 1920 was (according to the evidence of Mr. Martin and Exhibit No. 174) about $6,450 per mile, the freight earnings were about $22,700 per mile and the total earnings were about $29,150 per mile.

For purposes of general comparison to embrace a similar region and in some respects similar business the foregoing might be compared with the combination of the two Hydro Divisions, Toronto to St. Catharines and Hamilton-Galt-Elmira, aggregating 154 miles. In these combined (using Mr. Arnold's figures), the passenger earnings in 1925 are expected to be at the rate of about $13,000 per mile, the freight at about $9,300 per mile and the total at about $22,700 per mile covering all classes of business except suburban and local street railway (which latter would add about $2,900 per mile of spread over the whole mileage). It is thus evident that these two portions of the Hydro System, situated in the locality, expect together to earn at a rate about 77% of that of the best paying steam road, not only in the region, but in the Province, and this too in the first year of its operation (1925) as compared with the steam road's operation for 25 years.

(b) Electric Railways in Ontario Within and near the Region

With respect to comparison with the electric railway lines in the province reference is had to the Government's memo. of 6th July, 1920 (Page 8) as follows:—"Radial Railway projects with high power and high speed lines are, as far as Canada is concerned, a new field of enterprise It is true that there are certain radial lines in the Province, but it would hardly be fair to judge

the merits of the projected new scheme on the basis of the experience of the lines now in operation. If that were done the outlook would not be encouraging."

Although these electric lines are not doing quite the kind of business that it is proposed to develop under the Hydro Radial project there are many features which are sufficiently comparable in the identical portions of the region in which it is proposed to operate or in similar parts of Ontario, which will prove useful in visualizing the possibilities of the new system These are in such railways as the London and Port Stanley, very much quoted by the Hydro Radial officials as a nearly similar type, the Niagara, St. Catharines and Toronto and the Toronto Suburban to Guelph, both of which it is proposed to purchase under the project, the Dominion Power and Transmission Company's Railways at Hamilton which will be a direct competitor in the heart of the region, the Grand River and the Lake Erie and Northern owned by the C.P.R., and operating in the group area of Galt-Kitchener, and the purely Radial Railways operating out of Toronto, owned by the Toronto and York Radial, now about to be acquired by the City of Toronto, etc., under a separate project.

The London and Port Stanley is a rehabilitated steam road of high standard, efficient and well operated, owned by the City of London under the technical direction of the Hydro Power Commission. It is situated strategically where it gets not only a large local passenger business, but a very large freight business, acting not only as a switching road between several steam roads but as a connecting road for the supply of large quantities of coal to these steam roads and to Western Ontario coming in across Lake Erie. This road is pointed to as a type or pattern on which the Hydro Radials are to be designed and is looked upon, despite its short length of 24 miles, as comparable with the similarly situated proposed trunk line and freight switching road, Toronto to St. Catharines. This road in 1920 earned a passenger revenue of $11,800 per mile, a freight revenue of $9,800, and a total revenue, including miscellaneous (but excluding Port Stanley Park) of $22,800 per mile.

Compared with this performance the Toronto-St. Catharines Division of the Hydro Radials, 72 miles long, the best earner of the system, is expected to secure in 1925 a passenger revenue (interurban and suburban) of $23,300, according to the Hydro estimate presented in October 1920, and of $24,150, according to Mr. Arnold's estimate presented in May, 1921. (If the Suburban is omitted, Mr. Arnold's expectation for the interurban is $19,470 per mile.) As to freight expectations the Toronto-St. Catharines Division is expected to earn in 1925 at the rate of $19,560 under the Hydro estimate, presented in October, 1920, and $15,160, under the Arnold estimate presented in May, 1921. This gives a total (Hydro estimate) for passenger and freight businses of $42,860 per mile.

In many respects significant comparison may be made in the case of the Niagara-St. Catharines and Toronto Railway, which it is proposed to purchase from the Dominion Government and incorporate into the scheme. This road with a total mileage of 64 miles, of which about 16 is local and 48 freight carrying, has been in operation for many years, has the advantage of being well established, is itself essentially a freight switching road and has a special type of passenger business on its main line to Niagara Falls. In 1920, it actually earned a passenger revenue—including the suburban and local street railways in the several towns and cities—of about $10,000 per mile, whereas it is expected of it by 1925 when it is operated under and within the System of Hydro Radials to earn a combined interurban, suburban and local passenger revenue of about $13,000 per mile, in the Hydro Estimates, and $13,800 per mile in Mr. Arnold's estimate. In freight it actually earned in 1919 within 48 miles of line) at the rate of about $5,550 per mile and $6,800, in 1920; the estimates for Hydro operation in 1925 put an expectation of about $10,700 per mile on this freight business by the Hydro estimates on a 48 mile basis (and $7,994 on a 64 mile basis) and about $10,500 per mile by Mr. Arnold's report on a 48 mile basis. The combined freight and passenger revenue expected on this Division in 1925 is upwards of $22,200, per mile on a 62 mile basis, compared with the actual 1920 performance of $15,000 per mile total revenue. In explanation of this very great increase it is stated by the Hydro officials that they expect large increases in population and industrial activity during the next five years and that the corporation of this group within the Hydro System will greatly increase the business.

As to the Toronto Suburban the earnings of this road in 1919, including sale of power and miscellaneous, were about $5,800 per mile for the 68 miles total length, including local suburban

lines. The Hydro Radial project after incorporation into the system, developing the local and suburban business and extending the line down the Humber to connect with the main Toronto-St. Catharines line at Sunnyside, expects to increase this revenue in 1925 to $14,800 per mile, according to the Hydro estimate of October, 1920, or to about $12,100, according to Mr. Arnold's estimate of May, 1921.

The several lines of the Dominion Power and Transmission Co. radiating from Hamilton also present a useful comparison in some respects, although the standard of construction and type of service given by these is not as high as is expected to be offered by the Hydro Radials in the locality. The Hamilton, Grimsby and Beamsville branch of this system, 22.5 had a total revenue in 1919 of about $8,200 per mile. The best paying branch, that from Hamilton to Brantford, 23 miles, had a total revenue in 1919 of $11,100 per mile.

The group of electric railways comprising the Grand River (20 miles) and the Lake Erie and Northern (50 miles) subsidiaries of the C.P.R., have also a strategic situation, joining the cities and towns of Galt, Hespeler, Preston, Kitchener and Waterloo as well as Brantford, Waterford and Port Dover. The System is operated for both passengers and freight and is mostly of a high standard construction, mainly on private right-of-way with portions similar to the London & Port Stanley and the class of business very like what is proposed by the Hydro Radials, that is, Interurban and local passenger with carload and less than carload and express business. At Galt it has 10 industrial sidings, at Preston 17, at Hespeler, 5, at Kitchener 10, and Waterloo 13. All have terminals except at Galt, where it is jointly with the C.P.R. They enjoy the advantage of working directly as feeders to the C.P.R., and handle a considerable amount of freight in that manner.

On the Grand River 65% of revenue is freight of which 95% is through. On the Lake Erie and Northern about 35% is freight. The total earnings on the Grand River in 1920 were about $17,760 per mile, a considerable increase over the previous years which had run from $10,900 in 1916 to $12,500 in 1919, during which period the yearly surpluses ran down from $51,000 to $27,000. Passenger earnings in 1920 were at about $7,500, and freight and express at about $9,900. These in 1919 were respectively $5,600 and $5,800, the differences indicating mainly increases in passenger and freight rates. Money is now being put into this division for new equipment and revisions of lines, and when this is done the investment will be about $110,000 per mile (including 5 miles double track and about 20% for private right-of-way). It is considered that the road will then be a first class interurban road.

The Lake Erie and Northern had a total earning in 1920 at the rate of $6,470 per mile. Its cost in 1916 was about $76,000 per mile with private right-of-way, 85 lb. rails and heavy equipment.

The radial railways operating out of Toronto, a total length of 72 miles, comprise the Metropolitan Division to the North, the Mimico to the West, and the Scarboro to the East; all on highways near Toronto. The Metropolitan has 3½ miles within the city limits as a purely local system, is comparable only with city lines as to earnings, and is not a criterion as to interurban service. The revenue from all services was $14,331 per mile for the 72 miles. That of the interurban portion of the Metropolitan earned at the rate of $6,850 per mile, for passenger, and $1,990 for freight in 1920. The earnings on the Mimico Division in 1920 were about $22,000 per mile, which indicates its suburban character.

(c) Electric Railways in the United States

Electric Railways in the United States have had a most unsatisfactory history during the past ten years or more. To quote the findings of the Federal Electric Railways Commission, which reported to the President in August, 1920, "The Electric Railway industry, as it now exists, is without financial credit," and amongst other reasons they give, "They were not conservatively financed in their early years and have not since made good their over-capitalization," "Neglect to amortize this excess capitalization," "Failure to amortize the normal accrued depreciation," "Overbuilding into unprofitable territory," "Automobile and jitney competition," "The cost of new money." An attempt is made to suggest the possibility of bettering things in the future but no satisfactory statement is made which gives real promise of any probable or early solution of the problem.

While this situation and criticism applies largely to street railways it includes also the thousands of miles of interurban and suburban lines. In the middle states Pennsylvania, Ohio,

Indiana, Illinois and Michigan) those Systems within the Central Electric Traffic Association are about thirty in number, and of these, according to both Mr. Coen and Mr. Todd, only a few, perhaps five, have during the past ten years been making any returns on the capital (outside of bond interest) and many others have failed to pay even their bond interest. Both of these gentlemen are experienced electric railway operators and have a close knowledge of the industry in the Central States. Mr. Todd knows of no interurban electric lines which were built in the States during the past ten years, and Mr. Coen says that no new interurban building was done around Cleveland or in Ohio, since 1906. Mr. Bailey, an expert from the well known firm of J. G. White & Co., New York, who finance, build and operate electric railways, says they have had no new construction in eight or ten years, and adds "The idea of any one suggesting financing of an electric interurban road would not be given very serious consideration. Of recent years that feeling has been accentuated because they have all been in such a bad way." ....

It is obvious from the foregoing, that but few interurban electric railways in the United States can be looked to as encouraging examples of the business and the evidence given, and the personal knowledge gained by the Commission on its tour of inspection of various railway systems, confirm the belief that the very few systems that are being financially successful are situated in or close to exceedingly dense and populous, even metropolitan centres, or have some competitive or financial advantage which distinguishes them from the less fortunate ones.

The System which has perhaps been more frequently examined in this Inquiry in this regard, is that of the Detroit United Railways. Four divisions of this system have been particularly in evidence, the Detroit-Toledo, the Detroit-Jackson, and the Rapid (Main Line) and the Flint. The entire system has nearly 1,000 miles of which 306 miles are city (route) miles of line. The system is essentially a passengr one ,although intrurban, and even suburban lines, carry freight, but not in standard box cars, as their franchise prevents them carrying them on the city streets. It has grown up around Detroit with eight lines radiating from it, of which two are parallel to the river, one in each direction. The principal features of this system comprise:

(1) The large population served (about two million) of which over one million is in the City of Detroit,
(2) The self-contained and self-centred radiating system with a radius roughly of from 50 to 75 miles.
(3) The large suburban business into the metropolitan centre.
(4) The rapid growth of Detroit and surrounding cities and towns, some of which were shown to increase independently of the interurban railways' entrance.
(5) The disadvantages of not having a private right-of-way into the city and slow running through the City of Detroit, amongst the city street services and
(6) The disadvantages of no freight terminal in the centre of the city.

In comparing the Hydro Radial project with the existing system in and about Detroit, the outstanding features are that the population of the latter is about twice that of the Hydro Radial region, but centred within an area very considerably less; the truly radial character of the lines all leading to Detroit are much more advantageous than the extended layout of the Hydro around the shores of the lake, etc., and the metropolis itself is twice the size of Toronto. On the other hand the Toronto situation is more favourable than Detroit, in that it can provide a direct right-of-way near to the centre of the city.

The best division on this system is the Detroit, Munro & Toledo, an essentially interurban road, of high standard construction, 60% double tracked, on private right-of-way. It is 51.7 miles long from Detroit City limits to terminal in Toledo, which is a city of 243,000 population (about twice the size of Hamilton, and of similar industrial nature). There is only a moderate rural population, but Munro, about two-thirds of the distance to Toledo, has a population of about 11,500. The equipment is heavy type similar to that proposed by the Hydro Radial. The running time for the fastest limited trains is 2 hours 10 minutes, to cover the 57 miles between terminals of which 5.2 miles is in Detroit over the city strees, consuming 40 minutes, and 3.6 miles is in Toledo, requiring 20 minutes. The average speed between terminals is thus 26 miles per hour, while the interurban running time between city limits is at about 46 miles per hour. (Note that if these fast trains could run over a private right.of-way instead of on the streets, in each city, at say 20 miles per hour, the average speed between terminals would be increased to about 37 miles per hour). It is interesting, according to Mr. Rodger, that this road carries about

80% of the local passengers between Detroit and Toledo. This is understandable, considering the passage of the electric cars through the city streets, the cheaper rate on the electric ($2.40 compared with $3.60 on the steam, return), and notwithstanding the faster time on the steam roads.

On the Detroit-Toledo Division the interurban earnings under these conditions were in 1920:—for passenger, $14,381 per single track mile, and $22,915 per route mile (i.e. considering double track); for freight, $3,733 per track mile, and$6,123 per route mile. The passenger revenue per car mile was 80 cents, and the freight and express were 97.6 cents per car mile. (These figures are taken from the evidence and report of Mr. Rifenberick, Consulting Engineer, late of the Detroit United Railways, who prepared extensive tables on the performance of these lines. The figures given by Mr. Rodger, the Auditor of the same Railway in his evidence, agreed approximately with these.)

The Detroit-Jackson Division is 70.6 miles in length, to Jackson, and with branches, has 95 miles; two-thirds is on the highway, and it is practically all single track. Jackson has a population of about 48,000; Ann Arbor a University City, 19,500; and Ypsilanti, 7,400. The total population tributary to this division is about 112,000 outside of Detroit. Its earnings in 1920 were:—Passenger, $12,512; Freight, $3,488; and total, $16,993 per route mile. (Mr. Rifenberick's figures with Mr. Rodger in close approximation).

The Rapid (Main Line) Division has a length of 75.7 miles running north to Port Huron. It is mostly on the highway and, with the exception of 10 miles, near Detroit, is single track. The total population, outside Detroit, is 107,000 including, however, 48,000 of the suburb Hamtramek: Port Huron has 26,000 and Mt. Clemens 9,500. Its earnings in 1920 were:—Passenger, $16,024 (Mr. Rodger closely agrees) Freight, $2,287 and Gross $20,396 per route mile (from Mr. Rifenberick only). It is to be noted that the small local Shore Line Branch, 17.4 miles, which belongs to this Division, if added will reduce the foregoing total figure to about $15,500 per route mile.

The Flint Line has a total length of 80 miles practically all single track. The local city line in Flint, with a population of 91,000, a recent growth, is included in the system. The interurban earnings for this division in 1920 were:—Passenger, about $13,000, per route mile (Mr. Rodger).

In general the comparison of the entire Detroit United Railways' System with the proposed entire Hydro Radial project indicates the large expectations of the latter. Messrs. Price Waterhouse's tabulation in which they use the Annual Report of the Detroit United, for 1919, on a mileage of 928, shows this system with a gross revenue of $24,683,037, made up of passenger revenue, $23,108,561, (which includes the huge earnings of the City Street Railways of Detroit) and freight revenue of $1,514,238, together with a small miscellaneous. This is to be compared with the Hydro Radials' expectation in 1925 on a mileage of 323, with a gross revenue of $8,083,941, of which $4,937,624 is for passenger, and $2,877,557 for freight, and $268,760 miscellaneous. Put on a route mileage basis these become: For the Detroit United, Passenger, including City, $24,864; Freight, $1,632, and total, $26,561. For the Hydro Radials, Passenger, $15,287; Freight, $8,909, and total, $25,028. (From the Hydro estimates submitted in October, 1920). While the total earnings per mile are similar it is to be noted that the D. U. R. comprise the large city passenger revenues, whilst the Hydro Radials expect a passenger revenue nearly 60% thereof, together with an exceedingly high freight revenue, five times that of the D. U. R.—all this in an area with a present population only about half that of Detroit region.

The Washington, Baltimore & Annapolis Railway operates between these cities with a total distance of 62 route miles, mainly on private right-of-way. The population of Washington is 537,500, and of Baltimore 733,800. The main route is between Baltimore and Washington, a distance between terminals of 44.2 miles, which their trains make in one hour and thirty minutes. Of this distance, 7 miles is through Washington City and Suburbs, which consumes about 16 minutes, and 2½ miles in Baltimore, which takes 10 minutes. The line is double tracked except for about 5 miles near Baltimore. It competes with two double track steam roads, whose length is about 5 miles shorter, and which make the run in times varying from 55 minutes to 1 hour and 5 minutes. The relative fares between Baltimore and Washington are $1.13 for the electric, and $1.56 for the steam. The nature of competition is therefore such that the electric line has to do a large business under conditions attractive to the public—it is evident that the cheaper fares

and the convenience of cars passing through the streets are advantageous factors against which the shorter time of the steam trains is to be considered. It is to be noted, too, that there is no steam road to Annapolis, where the Naval College is situated, so that this branch, 17 miles, has no competition.

This railway has been in operation since 1908, gradually developing business, but during the war had a prosperous period, owing mainly to a large military camp (Meade), between the two cities. Its earnings have considerably fallen back since 1918. In the year 1919 the passenger revenue was $1.967.672, the freight, $167 957, and total, $2.168.119. These revenues gave $18.535 passenger, and $1.582 freight, and $20.423 total per mile of track, and $31.777 passenger, and $2.712 freight, and $35.015 per mile of route. For the year 1920, the total revenues were $19.709 per mile of track, and $33.790 per mile of route. (These from the Annual Reports of the Railway, prepared by Price Waterhouse; they are approximated in the evidence and Report. Exhibit 175, by Mr. Bailey). In 1919 this road made a net surplus of $3.739 per mile of route.

The Washington-Baltimore is essentially an interurban main line road between these two large cities, with terminals 44 miles apart, whose aggregate population of 1.671,300 is considerably more than the population in the entire Hydro Radial area. It has been in operation over ten years and has a developed business. It is almost entirely a passenger line, the freight business being less than 10%. This road does not seem to be comparable with or to have a counter-part in any portion of the Hydro Radial project, and is not useful for comparison except perhaps in matters of cost of operation in which, while higher than the Hydro estimate generally, it runs lower in power and labor costs, and in Operating Ratio it runs considerably higher and more in line with other successful electric roads in the United States.

The Lake Shore Electric running westward out of Cleveland, a city similar and similarly situated to Toronto, has a total length of about 171 route miles. It operates express to Toledo joining such large towns as Lorain, Norwalk, Sandusky and Fremont, and runs through cars to Detroit. The population of Cleveland and suburbs is about 838.000, and with Toledo and other cities, etc., has a total population of over 1.400,000. The fast express cars run at 30 to 35 miles per hour, and the line and equipment is high standard. The cars run over Cleveland city streets and the conditions are similar to Detroit. This interurban business is looked upon as the most profitable especially between Cleveland and Toledo. There are suburban and local services as well in the smaller towns and in these respects this system would be somewhat similar to that proposed in the Hydro Radials. The business is largely passenger and the freight is mostly express and "less than carload." This System, in 1919, had a Passenger Revenue of $10.000 per mile, freight of $2.566, miscellaneous, $1.075, and a total revenue of $13.641 per route miles. In that year it made a net surplus of $1,566 per route mile.

The Northern Ohio Traction Company is one of the most successful and best paving interurban electric railway systems in the United States. A comparison with it is somewhat difficult however, as about a third of its revenue is derived from miscellaneous sources such as sale of power, etc. It operates out of Cleveland, connecting Akron and Canton, and with these terminals serves a total tributary population of about 1.300.000. It has 172 route miles, of which about 40% is double track. In 1919 it earned passenger revenue at the large rate of $23.646 per track mile, which includes various local city lines; its freight revenue in the same period was very small, only $1.435 per track mile. (From Annual Reports and Mr. Bailey's evidence). It is an example of a system with a highly remunerative suburban and urban business.

The Chicago, North Shore and Milwaukee has already been referred to. It is a suburban road northward from Chicago, serving all the suburban towns along the lake which for 26 miles are practically continuous, and also a fast, interurban, road to Milwaukee. The main line is 86 miles long, on a private right-of-way double tracked, and has been in operation since 1908, although not until 1919 did it run its trains direct over the Elevated into the centre of Chicago. It has a frequent and fast service, there being 110 trains per day in and out of the loop at Chicago. The equipment is of the highest interurban standard. It has in competition two steam railways, one of which is alongside, and also the boat lines which compete in both passengers and fast freight. The road's freight service is being developed for Express and less than carload business; delivery into Chicago is by motor trucks. The total tributary population is about 3,500.000, of which Chicago has 2.700,000 and Milwaukee 457.000. 57% of the passenger revenue is business in and out of Chicago. The fares are based on 3 cents per mile, the rate Chicago

Loop to Milwaukee being $2.57 plus war tax; commutation suburban fares are at about 1½ cents per mile. The passenger revenue of this road in 1920 was at the rate of $34,349 per route mile and freight and express $4,535, all based on 104 route miles. (These figures from Mr. Thompson's evidence). This road presents about the best example of the highest class suburban and interurban electric railway in the United States.

The Auroro, Elgin and Chicago line was frequently referred to. It operates westward out of Chicago, having a route mileage of 73. It serves a tributary population, essentially suburban, outside of Chicago, of about 118,000. In 1919, it earned Passenger Revenue of $18,118, Freight and Express, $2,486, and with miscellaneous, a total revenue of $23,209 per route mile. (From Mr. Bailey's evidence).

The Waterloo, Cedar Falls and Northern Ry. of Iowa was described in evidence, by Mr. Cass, the manager, and appeared to be a good example of an interurban road in an agricultural region with some industrial activity, and doing a large freight business in proportion to passenger, much the same as is expected of certain branches of the Hydro Radial. This road is 93 miles long, including the Industrial belt line (13 miles) at Waterloo, a city of 36,000, and including the local street line. The total tributary population served, including terminals, is about 110,500. The competition with steam railways is keen, but the electric gets 76% of passenger business, notwithstanding the steam is much shorter and the rate slightly cheaper. Of the freight business, which produces about half of the total revenue, 75% is carload, and 25% L.C.L. in tonnage, indicating that the road does a large transfer or switching business from the steam road. This freight business is divided about evenly among farm products, coal quarry products and manufactures. The passenger revenue of this road in 1920 was at the rate of $4.290, the freight at $4,050, and the total (with miscellaneous) at $8,640 per route mile. (From Mr. Cass).

The Indiana Service Corporation is a combination of several lines centred on Fort Wayne, and aggregates 220 miles, of which about 140 are purely interurban, and the remainder local. It joins Fort Wayne with LaFayette in Indiana and Lima in Ohio, and has branches to Bluffton and Decatur. The total population tributary is about 250,000, of which Fort Wayne has about 100,000, La Fayette 25,000 and Lima 40,000. The earnings of this System for 1920 as given in evidence by Mr. Feustel, the President, were for the whole system, $6,636 per track mile, of which $5,308 were passenger, and $1,327 freight and express.

The Union Traction Company of Indiana is one of the large systems in the middle States, joining Indianapolis, Muncie, Marion and other smaller towns, lying north of Indianapolis, through a series of lines aggregating 452 miles, almost entirely single track. The average earnings were over this whole system in 1920, $7,085 per track mile. (Mr. Feustel). One of the best paying divisions is the Muncie-Indianapolis, 56 miles long, having a tributary population, including Indianapolis, of about 400,000. The earnings of this Division in 1920 were: For passenger, $11,945; freight and express, $4,039, and total, $16,469 per route mile. As this region is similar to our rural and interurban country, it, and these other railways of like nature in the middle States, are included herein for comparison.

The Terre Haute, Indiana and Eastern Railway System centres around Indianapolis and westward. It comprises 403 miles of line, and includes a main line to Terre Haute, 72 miles, as well as eastward, the same distance, to the Ohio Boundary, also four branch lines radiating from Indianapolis. It was built mostly between the years 1902 and 1909. It is about 80% on private right-of-way, practically all single track, and is built to a high steam standard of moderate class with 70 lb. rails, stone ballast and equipped with high class, but not luxurious cars, capable of very fast speed. Mr. Todd, in his evidence, says that between Terre Haute and Indianapolis, they operate "as fast, if not the fastest service of any interurban I know of in this country," at 72 miles in 125 minutes, including 4 stops, 34.5 miles per hour, and at places as high as 68 miles per hour. There are two trains each way at this schedule. Interurban passenger fares are based on three cents per mile. This System operates also the city railways, and in Indianapolis has an exceptionally fine Terminal, with large office building at the Civic Centre, into which all cars run and discharge passengers and light freight. The freight business is developed to its limit in competition with the steam roads, and they have made a specialty of agricultural business, including live stock. The total population tributary to this System in 1920 is about 630,000, of which 314,000 is in Indianapolis, and 66,000 in Terre Haute. Indianapolis has altogether 140 different kinds of industry; its automobile industries are second only to Detroit. Mr. Todd, in his

evidence, gave the interurban earnings in 1919 on the entire System as: Passenger Revenue, $7.090; Freight Revenue, $1.693, and Total Revenue, $8.783 per route mile. On the best earning division, Indianapolis to Terre Haute, the Total Revenue was $11.861 per route mile.

All the foregoing instances of electric railways operating in the United States are given for the purpose of permitting a comparison to be drawn, and a measure made of the expected performance of the proposed Hydro Radial Railways in Ontario. The various types and the circumstances under which these United States roads operate indicate the effect of different localities, populations, industrial activity and conditions of operation that it is reasonable to deduce, from amongst them, the possibilities of similar performances by the proposed new lines.

The expected earnings of the PROPOSED HYDRO RADIAL SYSTEM are here given so that this comparison may now be made. These anticipated revenues as put forward for 1925 by the Hydro Radial Engineers in their estimates, furnished this Commission in October, 1920, are as follows:

For the *entire System of* 328 *miles* comprising interurban, suburban, local and freight services averaged over the whole length:—

Passenger Revenue	$15.064	per route mile
Freight Revenue	8,779	per route mile
Miscellaneous Revenue	820	per route mile
TOTAL REVENUE	$24.663	per route mile

For the best earning division, viz., the TORONTO AND ST. CATHARINES, 72 miles long, comprising the interurban, suburban, local and freight services:—

Passenger Revenue	$23,300	per route mile
Freight Revenue	19.360	per route mile
Miscellaneous Revenue	687	per route mile
TOTAL REVENUE	$43,347	per route mile

The comparison of these revenues with the various performances of the large and most successful of the United States road, having elements of similar character, leads obviously to the belief that the expectations of the Hydro Radials are highly optimistic, especially in the first year of operation, compared with roads which have been in business for from ten to twenty years, and particularly when it is considered that the total population of the Hydro Radial Region now about 972.000 (and expected by the Hydro Engineers to be 1.108.000 in 1925) is considerably less in most cases than those of the regions in which these United States roads operate.

IX. COMPETITION BY EXISTING RAILWAYS, ETC.

A glance at a map of the territory in question in which it is proposed to construct the Radial Railway Project, shows the extent to which it is already served by existing transportation systems, both steam and electric.

Attached hereto are two maps of the Hydro Radial Region (Appendix 11). The one map shows the existing steam and electric railways, and the cities and towns and junction points. The other is the same map having the Hydro System laid on in red. It is to be observed with the latter that in those cases where the Hydro Radial system is intended to absorb existing lines such as (1) the Niagara, St. Catharines and Toronto Electric system, (2) the Oakville, Burlington branch of the Dominion Power and Transmission electric system, (3) the Grand Trunk Steam branch, Galt to Elmira, and where running rights are intended to be acquired, as on the Grand Trunk steam branch, Preston to Guelph, the red line is shown alongside the steam or electric one. This is done for the sake of clearness, and it must not be considered that it means a process of paralleling unless, as has been said in evidence, it might be found that the steam or electric lines could not be acquired from the present owners as hoped for.

The question of steam and electric road competition has already been dealt with very fully under different previous headings, and frequently when discussing local conditions and possibilities. The broad principle remains, however, that the proposed new Hydro Radial system is intended to be introduced into or superimposed upon a region which is already served by steam railways which do much of the business that the new electric ones are ambitious to do. The possible field for a new system is most likely to be more limited to certain classes of business

already pointed out, which it is hoped to obtain by reason of a frequent and somewhat more elastic and local service.

There is also to be considered the question as to what the steam roads are likely to do in anticipation of the entry into the field of the new electric system. Various statements were made in evidence as to courses that were open to the steam roads, and which of these they might possibly pursue. Some of these suggestions included the putting on of steam suburban trains out of Toronto for instance; the electrifying of certain portions of steam roads, and the putting down of a third track, for instance, on the Grand Trunk, between Toronto and Hamilton, for electric operation. The probable action of the steam roads to protect against the loss of carload freight business has already been indicated.

The Express Companies are also an element in competition, against which the new Hydro Radial System would have to work, and evidence was given as to this, especially in respect to fruit business, and the use of motor trucks in co-operation.

The steam boat business across Lake Ontario is not to be lost sight of. This is very considerable during the summer months, in both passenger and freight, and would very seriously cut into such business anticipated between Toronto and points like St. Catharines and Niagara Falls. To gain an idea of the extent of this business the following figures, which have been furnished by the Canada Steamship Lines, will be useful:—

On the Toronto-Niagara Line, two boats, in 1920, with a capacity of 4150, carried a total of about 311,000 passengers, and 12,000 tons of freight.

On the Toronto-Hamilton Line, 1920, two boats, capacity 2,400, about 97,000 passengers, and 22,000 tons of freight.

X. WILL THE PROPOSED SYSTEM BE SELF-SUPPORTING?

Naturally a very large part of the inquiry was directed to the determination of whether the proposed Hydro Radial project would be self-supporting. This was one of the primary objects, and for this purpose the original requisitions were made upon the Hydro Electric Power Commission to give the figures upon which the expectation of the successful operation was based.

The Hydro Electric Power Commission had already prepared and issued various estimates of cost of revenue and operation. First, the preliminary ones; then those submitted at various times to the municipalities and upon which they voted; then these estimates revised (including Mr. Murray's), were submitted to the Government in June, 1920 for endorsations; then on the appointment of this Commission of Enquiry, and following our requisitions, further estimates were submitted in September and October, 1920; then came new and further estimates prepared and submitted by Mr. Arnold, of Chicago, in May, 1921, (1) on a new principle, being for the Hydro Radial project with various material changes in plan, and (2) for the Hydro Radial project with revisions of cost only as Mr. Arnold thought ought to be applied (the "Supplementary Report"). All of these are set out in Appendix No. 3, from which the many variations in cost of construction and operation which had been made from time to time, can be seen. The estimates submitted to this Commission by the Hydro Electric Power Commission, now constitute the estimates of construction, revenue, operation and net income or surplus upon which the inquiry rests, and upon which it is to be determined whether the project will be self-supporting. These are to be taken, however, in conjunction with Mr. Arnold's further estimates.

In the following considerations, under the various factors entering into the successful financial operation of the undertaking, special attention is not only paid to the estimates and expectations put forward by the Hydro Power Commission and its Engineers, including Mr. Arnold, but these are examined in the light of the testimony of expert witnesses who have appeared before the Commission. These have had long and special experience in the actual operation, both financial and technical, of railway systems of this nature. It is to men with experience of this kind that this Commission has particularly looked for guidance as to the likelihood of the financial operative success of the Hydro Radial project.

(*a*) *Construction Costs*:

The estimates for construction provide for an Electric Railway System of exceedingly high standard as already indicated, and for a project seemingly conceived in a desire to obtain what has been termed a "super road" combining all the expensive features of the permanent way and structures of the high standard steam railroad with electrical features and equipment which, if

anything surpass those of the highest standards in electric railway construction. The intention appears to be to include not only the best features, but in many respects the most expensive and even luxurious that are to be found in those electric suburban and interurban railways operating out of large metropolitan centres like New York, Chicago, Philadelphia and Detroit, (exclusive of such steam electrified roads as the New York Central, New Haven, etc.) Indeed it has been brought out in evidence that in some cases it is intended to exceed these roads in the matter of expensive equipment.

The estimates of initial construction, assuming commencement so as to be into entire operation by 1925, which were presented to the Commission by the Hydro Electric Power Commission in September and October, 1920, are as follows, (including the purchase of the several Dominion Government roads and their betterments) :—

Toronto-St. Catharines Division	$20,603,953
Toronto Eastern Division	9,164,132
Hamilton-Guelph-Elmira Division	7,192,895
Toronto Suburban (Guelph) Division	3,591,774
Niagara, St. Catharines & Toronto	5,091,330
	$45,644,084

It is proposed in addition to the foregoing to add $2,724,069 in the first five year period of operation, and an additional $2,475,602 for the next period up to 1935, or a grand total of $50,843,755.

These additions are solely for the System as planned and not for extensions thereto.

The new and further initial construction estimates submitted by Mr. Arnold of Chicago, in May, 1920, covering the same routes for construction and operation by 1925, are given below. These differ from the foregoing in providing for various new features or additions to the Hydro's proposals which Mr. Arnold thought necessary to earn the revenue estimated, such as Subway Terminal in Toronto, additional double track, extra equipment, etc., and on the other hand show a reduction (of about 15%), which, in Mr. Arnold's opinion, would be justified by the downward trend in prices, as between May, 1920, and April, 1921:—

Toronto-St. Catharines Division	$19,580,000
Toronto Eastern Division	9,794,000
Hamilton-Guelph-Elmira Division	6,002,500
Toronto Suburban (Guelph) Division	4,222,000
Niagara-St. Catharines & Toronto	4,960,000
	$44,558,500

As in the previous instance, it is proposed in addition to add $2,900,000 by 1930, and an additional $2,623,000 in the second period up to 1935, or a grand total of $50,081,000. It is rather significant that notwithstanding the various changes incorporated by Mr. Arnold in his new estimates, the totals, although slightly less, do not differ materially from the original Hydro estimates.

On all sides it is agreed that the estimated construction costs of this System are very high. Placing the foregoing total estimated costs against the total mileage, the costs work to nearly $140,000 per route mile, including equipment. Considering the Toronto-St. Catharines Division alone, it is about $280,000 per mile. These are obviously very high compared with the costs per mile of various high standard electric roads described in the evidence, especially when it is considered that the Hydro Radial System is practically single track. (The Toronto-St. Catharines is about one quarter double track.) Mr. Rodger gave the cost of new double track city lines in Detroit during the past two years, including heavy foundations and paving, as about $100,000. per route mile, not including equipment, and also said that, covering the entire Detroit United System, city and rural, "the good with the bad", the valuation as in 1918 worked out at about $68,000 per route mile. Mr. Coen tells of the Lake Shore Electric double track line, including terminals (except Cleveland), as capable of being constructed at about $120,000 per mile. Mr. Cheval, speaking of the new high speed *double track line*, Buffalo to Niagara Falls, completed in 1918, including right-of-way, power and equipment for the 17 miles at about $225,-

000 per mile. Mr. Thompson says that the Chicago-North Shore's exceedingly expensive *double track line*, with separated grade crossings through the crowded suburban towns which stretch continuously out of Chicago, cost at the rate of about $271,000 per route mile. Mr. Cass gives a valuation figure of $100,000 per mile for the Waterloo and Cedar Falls line, including private right-of-way, terminals, street railways (double tracked), and equipment, and says that it might cost 40% more if built today. Mr. Todd says that the whole of the Terre Haute, Indianapolis and Eastern, with its steam railway construction (single track), cost about $60,000 per mile complete. Mr. Bailey says (p. 5932), that about $100,000 per mile would be a reasonable figure per mile for roads similar to this general type of road, single track, for a valuation as of the present time. Mr. Coleman says that their best line, Hamilton to Brantford, (single track), cost about $78,000 per mile, when built, but that a similar line might not now be built for $100,000 per mile. Mr. Royce says that the Toronto Suburban, if built now, would cost about $55,000 per mile. Mr. Kirkwood, referring to the costs of the Lake Erie and Northern, put into operation in 1916, gives figures which indicate that its cost was about $76,000 per mile. Mr. Martin says that the T., H. & B. steam road cost, when built, about $100,000 per mile, which includes the tunnel in Hamilton.

It is fair to say that much of the high class expensive construction is in and around Toronto and this naturally raises the question as to whether Toronto should not be separately considered and not exercise such an effect on the rest of the system as to cause such a high average cost per mile throughout the whole.

The question of whether the system can be constructed at the estimated cost was a matter for some discussion. On the one hand the cost estimates were criticized for not including certain general expenses incident to construction and, on the other hand, it was suggested that having regard to the changing and lowering cost of materials and labour there was a probability of their being constructed for a less amount than that contained in the Hydro's estimates submitted October, 1920. A fair estimate of this latter reduction on those construction costs appears to be about 15%, which is the amount used by Mr. Arnold in his report and evidence. Hopes were entertained by some witnesses that this might be further reduced but no substantial reasons were given in support in so far as construction in the near future is concerned.

The estimates for the general construction were prepared by Mr. Fairlie of the Hydro Power Commission staff, who seems to be an engineer of considerable experience in this work. These estimates were complete and detailed and as a matter of fact, stood the test of criticism very well.

In general the costs of construction (including the amounts for purchase of existing railways) averaging very high as indicated, provide for an exceedingly expensive system. The question is immediately raised as to whether a too expensive class of road is being provided for, especially having regard to the amount of business to be anticipated. The answer which is made to this is that unless this high class road is built it will not offer the competitive advantages with which to attract such anticipated revenues and so it is argued that this very high standard is necessary if the project hopes to succeed.

In considering whether the road will pay the factor of the annual carrying charges of interest on such high cost of construction must be kept in mind. In our opinion a road constructed at such a high cost is thus very seriously handicapped by reason of these necessarily high carrying charges. This is easily seen where, if using the figure of average cost per mile of $148,000 for the whole of Hydro Radial System the carrying charges, for interest alone, at 6% are $8,400 per mile, or about 35% of the entire revenue expected per mile. Also on the Toronto-St. Catharines Division, a single track road, (except for the suburban portion near Toronto) where the cost (for 72 miles) is at the average rate of over $285,000 per mile, the 6% interest charge is about $17,000 per mile, or almost 40% of the total expected revenue on this division. It is not apparent how a road built at such high initial costs and with such large fixed carrying charges per mile can justify itself compared with the best electric interurban roads now operating nor how it can economically compete within the region it intends to operate.

(b) Operation Costs.

It is expected by the Hydro Electric Power Commission Engineers to operate the Hydro Radial at a comparatively low cost. It is pointed out by them that the nature of the business

they propose to do, that is, the combination of various kinds of passenger and the various kinds of freight service which they will carry on at one and the same time, will assist in lowering these relative costs. It is also urged that the advantage of cheap electric power will be a factor. They expect by very close fitting of operating schedules by minimising lost time in stops, yards and waiting periods, by economising on depreciation and maintenance costs and in very efficient administrative and operative staff work to keep operation expenses down to a figure which, according to various expert witnesses engaged in actual electric railway management of a similar nature, appears extreme and optimistic.

Mr. Arnold in his report apparently recognizing a doubt as to these expectations, states that it is necessary to estimate operating expenses in considerable detail. "The variations . . . . make it quite impossible to arrive at any sound conclusions on any other basis than that of detailed estimates, in which the various items of operating expense are so estimated as to approximate as closely as possible the actual results to be anticipated on the given road with its given service."

This implies that the operation methods and cost of the proposed system will be peculiar to themselves, different from other roads and systems, and in this respect, as in the type of service and high cost of construction, a departure from standard and accepted practice in operation of such roads. These expectations appear plausible but when seriously considered in comparison with electric roads in actual practical and successful financial operation elsewhere, seems from the weight of evidence of men operating many of these roads more optimistic than advisable to rely upon.

The estimated operating expenses submitted by the Hydro Electric Power Commission in September and October, 1920, for the various divisions put on a route mile basis for the first year of operation, 1925, are as ollows:

Toronto-St. Catharines	$20,826 per route mile
Toronto Eastern Division	13,427 per route mile
Hamilton-Guelph-Elmira Division	11,007 per route mile
Toronto Suburban (Guelph) Division	9,817 per route mile
Niagara, St. Catharines & Toronto	14,060 per route mile
Average for whole system (323 miles)	$13,905 per route mile

The various factors which enter into these expenses are divided into general groups of (1) Maintenance of Way, Structures and Equipment. (2) Traffic Operation. (3) Depreciation. (4) Miscellaneous. Following is a tabulation of these operating expenses as submitted for the whole system by the Hydro Engineers in (1920), and by Mr. Arnold in (1921):

OPERATING EXPENSES, ENTIRE HYDRO SYSTEM AS EXPECTED IN 1925.

	Hydro Estimates.		*Mr. Arnold's Estimates.*	
Expenses.	*Amount*	*Per Cent.*	*Amount*	*Per Cent.*
Maintenance	$ 504,010	11.2	$ 541,000	11.9
Way and Structures, Equipment	438,282	9.2	469,000	10.3
Traffic Operation:				
Power Expense	604,219	13.4	645,000	14.2
Conducting Transportation	1,481,633	33.0	1,776,000	39.0
General Miscellaneous	891,196	19.8	745,000	16.4
Depreciation	572,002	12.9	374,000	8.2
	$4,491,342	100.0	$4,550,000	100.0

It will be observed from the foregoing that again Mr. Arnold brings out a total operating cost for the entire system almost the same as that of the Hydro notwithstanding the many changes he made in plans and service; his detail variations from the Hydro however, are considerable, especially in the Miscellaneous and Depreciation which he has put lower and in the cost of Conducting Transportation which is much higher. It is in the latter that variations in opinion occur and that divergence upon different lines may result due to management, wages, etc.

The cost of operation is based largely upon the cost of operating a car per mile and it is by this means that comparisons of operation costs are made in railway management. A great

deal of evidence was taken from operating experts on this point and the concensus of opinion was that the expectations of the Hydro Radial System were too low in this respect. Keeping in mind Mr. Arnold's statement as above, that such comparisons can be made only in detail and having reference to the kind of business expected to be done on these lines, it is desirable to give figures from different types of roads and compare them with different divisions of this system.

It is maintained by the Hydro Engineers that by reason of the large amount of freight expected to be handled, the average car mile costs of operation over the whole system will be brought down on account of the fact that the cost of operating a freight car is much less than for an interurban car. It has not been made clear in evidence, however, that the difference in actual practice is as great as the Hydro Engineers maintain, because due regard does not seem to have been made to the large relative costs of handling freight cars in and about yards, terminals, sidings, etc., and at such places where delays usually occur. Mr. Bailey says that terminal costs for such movements add from one-third to one-half to the cost of actual movement between terminals. This is reflected in a statement made in evidence by Mr. Staffel (6691) that the Cleveland Southwestern & Columbus Railway (out of Cleveland) had a freight car operation cost in 1919 of 43c per car mile. This appears to be the only figure in evidence as to an actual operating cost per mile for freight cars on an electric railway.

It is pointed out by Hydro Engineers that the cheap power costs will be advantageous toward low costs of operation; this has already been referred to as having but a small influence on the whole and as indicated in the foregoing table differences of power costs, cannot materially affect the whole.

It is also claimed by the Hydro Engineers and Mr. Arnold that the high speeds to be maintained in interurban services, the small lost periods of waiting at ends of runs which the very efficient management and close schedule will secure and the large mileage that is expected to be obtained from all classes of cars, will all tend to bring down the cost per car mile. Reference to the car mile costs given below for those electric lines already described which carry on high speed and highly efficient services in actual operation will indicate that this expectation is optimistic. In comparing these it should be borne in mind that in most cases the wages paid for operation labour, one of the largest elements in cost, are not far out of line with those proposed to be paid by the Hydro. It was shown in evidence that the Hydro expected to pay the same rates as now in force on the Niagara, St. Catharines and Toronto Railway; these rates are below those both of the Detroit-Toledo Line and the Chicago North Shore, typical high speed, highly efficient lines, operating out of very large cities, but above those operating out of Indianapolis, including the line to Terre Haute which too, is a very high speed line. It is to be observed also that as a general rule the operating ratio is lower on roads paying low wages (other things being equal) as wages form such a large part of operating costs. This is indicated to some extent later herein under "Operating Ratio." It is for consideration in this connection whether the lower "Platform wages" proposed by the Hydro (compared with some of these high class rapid roads) are to be considered reasonable in proportion for this special class of service and it is also a question in how far these lower "Platform wages" may not produce the low operating ratio expected.

In his report Mr. Arnold carefully works out the expected cost of operation per car mile for the various branches of the Hydro Radial System as they will be expected in 1925 as follows. These combine all classes of passenger and freight operation in each division.

EXPECTED CAR MILE COSTS—HYDRO RADIAL

Toronto-St. Catharines Division	72 miles	23.4 cents
Toronto Eastern Division	44 miles	22.4 cents
Toronto Suburban (Guelph) Division	70 miles	30.4 cents
Hamilton-Guelph-Elmira Division	80 miles	36.9 cents
Niagara, St. Catharines & Toronto	62 miles	41.9 cents
Entire System	328 miles	28.7 cents

Note 1. The above mileage is approximately only for comparison. The mileage for freight operation is considerably less.

Note 2. The original estimates for Car Mile Costs submitted by Hydro in October, 1920, were 32 cents over the entire system, the lowest being the Toronto-St. Catharines at 26.8 cents and the highest the Hamilton-Elmira at 38.7 cents.

It is to be observed and it is significant in the foregoing that the highest rate per car mile occurs upon the N. St. C. & T. now actually in operation, which is reasonably in line with most other electric roads doing similar business. It is to be noted that this division is intended to operate attached to the end of the New Toronto-St. Catharines Division which is expected to have the lowest rate per car mile and which forms thereby a striking contrast at the junction point. This difference has not been explained in evidence and does not appear consistent.

Following is a table of Car Mile Costs for various Electric Systems or lines, mostly in the United States, actually in operation which have already been referred to for comparison in other features. This table will serve to contrast the expectations of the Hydro Radial System as put forward by Mr. Arnold according to the above table. The figures given for these roads, now in operation, are for 1919 and 1920, and are exclusive of taxes:

COMPARISON OF CAR MILE COSTS.

1920	Terre Haute, Indianapolis & Eastern	403 miles	45.63 cents	(Todd)
1919	Detroit-Toledo Division (D.U.R.)	52 miles	44.5 cents	(Rodger)
1919	Detroit United (Part System)	250 miles	42.5 cents	(Rodger)
1920	Waterloo, Cedar Falls & Northern	93 miles	42.1 cents	(Cass)
1920	Indiana Service Corporation	140 miles	42.0 cents	(Feustal)
1919	Lake Shore Electric	171 miles	40.6 cents	(Coen)
1920	Chicago North Shore	86 miles	39.4 cents	(Thompson)
1920	London & Port Stanley	24 miles	35.5 cents	(Richard)
1920	Buffalo-Niagara Falls (high speed)	18 miles	35.5 cents	(Chavel)
1919	Chicago North Shore	86 miles	33.1 cents	(Thompson)
1919	Washington-Baltimore	62 miles	32.4 cents	(Bailey)

In order to classify the foregoing into various detailed costs especially on roads or systems which have now come prominently to notice for comparison with Hydro Radials the following table is added. This shows that the Hydro expects an exceedingly low cost for conducting transportation and allows only moderate charges for miscellaneous: the saving by cheap Hydro power is not a controlling factor in proportion to the total. The Hydro figures are taken from Mr. Arnold's report:

DETAILS OF UNIT COSTS PER CAR MILE.

	Main of Way	Main of Equip.	Power	Conducting Transp.	Gen. & Misc.	Total	
1925 Hydro, Entire System	4.6(a)	4.2(a)	4.1	11.1	4.7	28.7	(Arnold)
1925 Hydro, Toronto-St. Catharines	3.1	3.0	3.7	8.9	4.7	23.4	(Arnold)
1919 Chicago North Shore	4.4	3.7	5.0	14.0	6.0	33.1	(Thompson)
1920 London & Port Stanley	4.0	2.7	—(b)	20.4	8.4	35.5	(Richards)
1920 Buffalo-Niagara Falls	15.2(c)	—	2.4	9.9	8.0	35.5	(Chavel)
1920 Chicago North Shore	4.0	3.8	6.2	17.5	7.9	39.4	(Thompson)
1920 Indiana Corporation	7.0	6.5	9.5	14.0	5.0	42.0	(Feustel)
1919 Detroit-Toledo	9.0	3.8	7.9	15.2	8.6	44.5	(Rodger)

(A Depreciation in the Hydro figures is divided equally in Maintenance above.

(B) Includes Power, the price of which was not given.

(C) Includes all Maintenance.

With regard to the contention that the proposed Hydro Radials cannot be wholly comparable with some of these roads because of the features of speed, large freight service, and especially efficient management reference may be made, not only to the foregoing figures for the specially high speed and frequent service roads, but to the following table which shows the extent or the amount of service which is imposed on some of these roads, compared with what is intended to be imposed on the single track Hydro System. It is to be kept in mind that the car mileage expected over the entire Hydro System is about evenly divided amongst interurban, surburban and freight services. The argument that the very large amount of mixed service and especially freight, will materially reduce the operation costs, hardly seems

consistent with the actual results on these roads, and by reference to the operating costs of these high class American roads it will be seen that the expected operating costs of the Hydro are quite out of line. This table, incidentally, also shows the extraordinary crowding of the lines, both suburban and interurban, that it is intended to obtain on the Hydro Sysem, compared with other lines operating, especially those out of Detroit and Cleveland; this phase came in for some criticism by certain expert witnesses, and indeed was the main reason why Mr. Arnold decided to add double track to the original Hydro Engineers' plans. It is to be observed also that the Hydro System, with its high loading, groups itself amongst those double track systems operating out of very large cities, and this too indicates the very large business that it expected to carry on what will practically be a single track system.

CAR MILEAGE PER ROUTE MILE
SHOWING TRAFFIC IMPOSED ON VARIOUS LINES

Line	Route Miles	Car mileage per year of all Classes	Car mileage per year per Route Mile	Source
Terre Haute-Indianapolis (high speed)	72	1,140,000	15,830	(Rifenberick)
Muncie-Indianapolis	56	995,000	17,760	(Rifenberick)
Detroit United (part a)	250	6,976,000	27,900	(Rodger)
Lake Shore Electric	171	3,906,000	22,840	(Bailey)
Detroit-Toledo	52	1,795,000	34,520	(Rodger)
Hydro Radials, (entire)	328	15,904,000	48,450	(Arnold)
Aurora, Elgin & Chicago	73	3,682,000	50,250	(Bailey)
Chicago North Shore	86	6,905,000	80,300	(Bailey)
Washington-Baltimore	62	5,059,000	81,600	(Bailey)
Hydro: Tor-St. Catharines	72(b)	6,331,000	88,000	(Arnold)

(A) Car Mileage for Pontiac and Flint Line was not furnished.
(B) About one quarter double track.

In the light of the foregoing it does not seem reasonable in our opinion to expect that the Hydro Radials can operate at the exceedingly low costs they anticipate. Not only do these comparisons indicate this, but various witnesses, especially Dr. Herdt and Mr. Bailey have given strong opinions which confirm them. While it is difficult to arrive at any figure which should be taken or an amount which should properly be added say to Mr. Arnold's estimate of 28.7 cents, we are of the opinion that this figure should be increased by several cents to bring it into reasonable line with roads actually operating, even considering all the various advantages claimed for the Hydro project. As for the original figure in the Hydro estimates of 32 cents. average over the System, if that is to be considered at all, it was based on conditions much more unfavorable than Mr. Arnold's, especially in certain divisions, and taking these into consideration we are of the opinion that this figure, too, ought similarly to be increased to a figure at least as high as 35 cents.

(c) Passenger Revenues

The passenger revenue expected in the Hydro Radial project is based primarily upon population and secondarily on the expectation that this population will ride to an extent, and in and the other cities, is considered to be so great or dense, and their riding habit likely to be so great that the electric railway system will immdeiately attract sufficient passenger business to such a proportion called the "riding habit," so that a certain revenue will accrue to the new electric railways.

The population of the region, at present thought to be 972,000, including that of Toronto and the other cities, is considered to be so great or dense, and their riding habit likely to be so great that the electric railway system will immediately attract sufficient passenger business to assure the yearly passenger revenue estimated on the various divisions.

But the populations on which these expectations are based are not those of today, but those expected to be present within the region in the year 1925, which is assumed to be the first year of complete operation of the system after construction. This expected population in 1925 is variously estimated, and no clear conception of what was expected by the Hydro was brought out until the evidence of Mr. Arnold who, in his report, put the total in the region at about 1,108,000, an over all increase of about 14%. In this connection it is of interest to refer to the population tabulation which follows; generally speaking, the cities, towns and rural communi-

ties shown there together represent nearly 85% of the entire region. Taking the cities and towns alone shown, Mr. Arnold expects that they will have in the aggregate, an increase of about 21%, between 1920 and 1925. This indicates that the population figures used in these revenue expectations are based generally upon the large urban communities growing at a rate half as fast again as the smaller towns and rural communities.

It was clearly stated in evidence by Mr. Gaby and others that the expected passenger revenue could not be secured unless such large increases in population were assumed, and Mr. Gaby admitted (page 352), that if the existing populations (of 1920) were used for computation (it is presumed with the same riding habits) the project would show a deficit instead of a surplus.

This increase of population expected in the five years, and upon which the entire passenger revenue expectation is thus dependent, is based upon the projection upward of the rates of increase which have occurred mainly since 1900. In the case of the cities and larger towns these past rates have, in most cases, been very high, even during the war, (e.g. Kitchener, Oshawa, St. Catharines, Niagara Falls, Welland and Thorold, owing to munition work or new large public works), while in the case of the smaller towns and rural localities they have been very low, in fact many of the latter have decreased. These figures have been obtained and the projections or predictions of future populations made by the Hydro Engineers; Mr. Arnold accepted them for incorporation in his report.

Among these predictions of future population Mr. Arnold gives the following expectations for the five years, 1920 to 1925, the present populations being merely local (assessment) estimates, and not the actual census figures, such as are now being made in the census of 1921. It is to be observed in this connection that local population estimates are usually in excess of the actual Dominion census returns, so that there is some danger of high estimates having been used for the present (1920) populations, and if so, the expected per cent increase would in reality be more than Mr. Arnold shows, and hence more extravagant. In the following rural portions only the tributary populations are used computing a belt averaging 2½ miles on each side of the line, which seems reasonable. While no separate portion of the expected increase in population is shown as attributable to the construction of the electric railways, it is naturally implied in certain localities, as for instance, outlying villages, or towns, near a large centre or belts of rural areas in strategic localities. It is to be noted, however, that the expected increases are mainly in the cities and towns as previously indicated.

EXPECTED INCREASES IN POPULATION
(From Mr. Arnold's Report)

	Assumed in 1920	Expected in 1925	Expected in 1930
Toronto	515,000	620,000	720,000
Hamilton	115,000	142,000	176,000
St. Catharines	19,860	23,800	27,500
Niagara Falls	14,800	17,000	19,000
Welland	9,300	12,000	14,800
Whitby	3,800	4,880	6,670
Oshawa	12,000	15,700	20 500
Kitchener	23,000	28,800	36,100
Waterloo	5,700	6,540	7,570
Guelph	18,000	20,300	22,900
Galt	12,600	14,600	16,700
Preston	5,400	6,740	8,400
Dundas	5,100	5,700	6,520
Thorold	5,000	5,400	5,800
Etobicoke Twp. (Tributary)	3,569	5,570	7,540
Barton Twp. (Tributary)	4,777	6,100	7,800
Saltfleet Twp. (Tributary)	3,680	5,430	7,180
Scarboro Twp. (Tributary)	1,597	2,100	2,510
Grantham Twp. (Tributary)	3,000	3,300	3,650
Stamford	3,500	3,800	4,400
Crowland	1,000	1,200	1,400

In certain townships where there has been a steady decrease of population; the Hydro figures show an expectation of arresting the decrease, as for instance, in Trafalgar, Nelson, Clinton, Darlington, Niagara, Wainfleet, Louth, Beverly, Dumfries, Waterloo, Woolwich and Guelph. This list of only some of the townships concerned, indicates the extent of the depopulation of the rural portions of the region.

With respect to the increase in the City of Toronto, it is of interest to observe that a large percentage is expected to occur in those localities lying East and South East and West and Southwest at the outskirts of the City where the proposed radial lines are to be constructed.

The "riding habit," which as the term implies is the extent to which people use or are likely to use the electric railways, has been the subject of considerable testimony and discussion. It has been maintained that this is not only peculiar to interurban electric railways of this nature, but is dependent, both in electric and steam service, largely upon the distance from the centre where suburban riding is frequent, or between two centres where interurban riding is large. Much discussion arose as to the extent of riding as being dependent also upon the relative populations of the communities and their nature, i.e., whether residential, industrial or rural. It has seemed quite clear, from the evidence, that where cities and towns are sufficiently large to be self contained they would attract toward themselves passenger traffic from the vicinity and would not cause much traffic between adjoining towns of similar size and type. That means that the larger cities and towns will by their nature, business, industry, attractions, etc., cause a passenger flow towards themselves at the expense of the smaller communities. In the case of Toronto, and its immediate environs, this was amply clear, and these theories were borne out by the actual facts brought in evidence of large riding habits of the suburbs and outlying portions of the city itself, north, east and west. In other portions of the system, however, the applications of these principles were not so evident, especially in hypothetical expectations as to what the people would do when choosing their route and their class of transportation, whether electric, steam or motor car. Attempts were made to show graphically the effect of various factors on riding habit, but it was quite obvious that with so many variables, the best conceived curves frequently led to dubious results.

Much evidence was put forward to show the extent to which the population of the region and of the various divisions in it could be expected to contribute in passenger revenue per capita to the Hydro Radial System if put into operation. The estimates for revenue, both of the Hydro Engineers (in October, 1920), and Mr. Arnold (in May, 1921), are based upon an expectation per capita per year, riding frequently according to these "riding habits" as described. Following is a summary of the expected Passenger Revenue:

PASSENGER REVENUE EXPECTED, 1925.

	Hydro Estimate	Mr. Arnold's Estimate
Toronto-St. Catharines Div.	$1,694,676	$1,739,000
Toronto Eastern Division	940 000	1,101,000
Hamilton-Guelph-Elmira Div.	831,447	696,000
Toronto Suburban (Guelph) Div.	671,868	710,000
Niagara, St. Catharines & Toronto	799,633	856,000
	$4,937,624	$5,102,000

Note: Passenger rates are based upon the standard fares of 2.875 cents per mile. Suburban fares are at about 1.5 cent per mile.

In the foregoing the suburban passenger revenue is included with the interurban in Mr. Arnold's totals. It is to be observed that in the case of the Toronto Eastern, Toronto Suburban and Niagara, St. Catharines & Toronto Divisions he expects larger revenues than the Hydro's Engineers on account of the expected development of suburban business.

PASSENGER REVENUE PER ROUTE MILE EXPECTED IN 1925.

	Hydro Estimate on 323 miles	Mr. Arnold's Estimate on 330 miles.
Toronto-St. Catharines Division	$23,300	$24,150
Toronto Eastern Division	21,447	25,000
Hamilton-Guelph-Elmira Division	11,315	8,500
Toronto Suburban (Guelph) Division	9,795	10,140
Niagara, St. Catharines & Toronto	12,428	13,800
Average over System	$15.287	$15,150

Note: In the foregoing estimate of Mr. Arnold the suburban earnings on the suburban portions of the divisions (e.g. Toronto suburbs for both Toronto-St. Catharines and Toronto Eastern) are lumped with the entire division to show its expected earning power.

In connection with the foregoing tables it is to be observed that Mr. Arnold again has approximated the previous Hydro Estimates in bringing out passenger revenue totals and per average route mile almost the same. The manner in which he has arrived at these figures is quite different.

It is also to be noted that the Niagara, St. Catharines and Toronto Railway, now in operation under Dominion Government management, had a passenger revenue in 1919 of only $9,643 per route mile (Mr. Friend, and Exhibit 81).

As to passenger fares and their possible effect on revenues there was much evidence. It appears quite possible that interurban fares may be slightly reduced in the future when conditions warrant or demand arises from the public, but there again comes in the question of competition with steam railways. It has been stated in evidence that with a reduction of fares there would come a reduction in operating costs (per car mile), but it was clearly shown that such a reduction, if any, would not be in the same proportion. As to lowering operating costs in sympathy with fluctuating revenue, it was also shown that it would not be possible to regulate the costs per car mile with great refinement nor in the same proportion.

Comparing the foregoing expected passenger earnings over the whole Hydro Radial System with roads in the United States actually in operation, it is to be observed that the only ones of the latter which exceed the Hydro Radial expectations are those operating out of very large cities. For instance, the Chicago North Shore and Aurora, Elgin and Chicago earn more per mile; these are both fairly short lines and with considerable double track. The Washington & Baltimore Railway earns more, but is almost entirely double tracked. The Northern Ohio earns more only when including its large population of local city lines. Of the best earning branches of the large Detroit United System, the Detroit-Toledo earned about 50% more, with its 60% double tracked 56 mile route, and the Rapid Division earned about the same with its 85% single track.

This introduces the question of the expected yearly passenger revenue per capita of population in the region. The Hydro estimates comprise the following expected earnings, on and tributary to the various divisions, per capita in 1925 for all area outside of Toronto:—Toronto-St. Catharines, $9.95 per capita; Toronto Eastern, $9.85; Hamilton-Guelph-Elmira, $8.53; Toronto (Guelph) Suburban, not given; Niagara, St. Catharines & Toronto, $7.04.

Mr. Arnold gives, in his report, a total expected average passenger revenue over the whole system in 1925 of Interurban, $8.36 per capita, and Suburban $10.30 per capita. By divisions he gives: For Toronto-St. Catharines, Interurban, $7.13 and Suburban, $23.70 (for tributary population in and around Toronto). For Toronto Eastern, Interurban, $14.40 and Suburban $9.98 (in and about Toronto). For Hamilton-Guelph-Elmira, Interurban $5.93, and Suburban $5.23. For Toronto (Guelph) Suburban, Interurban, $8.95, and Suburban $14.18 (in and about Toronto). Niagara, St. Catharines & Toronto, Interurban $7.38, and Suburban $7.27 (in and about St. Catharines, Niagara Falls, etc.)

It will be useful to compare these per capita passenger earnings with some of the United States railways that have already been under discussion. Taking, for instance, on the Interurban business alone, over the entire Hydro Radial System of 330 miles, Mr. Arnold puts in a figure of $8.36 per capita, for an interurban population of over 400,000, excluding the population of the

terminal City of Toronto. Turning to the schedule in Exhibit 221, put in by Mr. Wilkinson, a Hydro Engineer, it will be found that a combination of those five interurban roads, the Detroit United and the Lake Shore Electric, joining the very large cities of Detroit and Cleveland with Toledo and smaller ones intervening, together with the Northern Ohio Traction (including Akron and Canton, and including their combined urban population of 295,000), and altogether having a total population of 1,205,000 served by 593 miles, have an interurban passenger revenue of only $8.12 per capita, excluding the population of the two large cities of Detroit and Cleveland. Compare the best division of the Hydro, viz., Toronto-St. Catharines, 72 miles long, which Mr. Arnold expects to earn in 1925 an interurban revenue at the rate of $7.13 per capita, exclusive of Toronto, with:—

(1) The best Division of the Detroit United, viz., Detroit-Toledo, 52 miles; this earned an interurban revenue in 1920 at the rate of $4.30 per capita, exclusive of Detroit, and

(2) The Lake Shore Electric, Cleveland to Toledo (total 171 miles); this earned an interurban revenue in 1920 at the rate of $5.01 per capita, exclusive of Cleveland. (These figures from Mr. Rifenberick's statistics Exhibit 228).

With respect to the suburban earnings it is to be observed that the rate per capita for the three lines entering Toronto are Toronto St. Catharines, $23.70; Toronto Eastern, $9.98; and Toronto Suburban $14.18, according to Mr. Arnold. It is to be expected, of course, that these will be much higher than the interurban rates, even considering the large tributary populations in city and suburbs. They do not appear so much out of line when compared with short roads or divisions doing suburban business out of comparable centres. In Toronto, the existing roads are now doing a similar business as, see Mr. Wilkinson's evidence, Exhibit 222; the Glengrove Division of Metropolitan (North) had $14.45 in 1920; the Mimico Division to Port Credit (West) had $20.50 (with population tributary of 13,920) and the Scarboro Division (East) had $11.92.

Considering all these features of the expected Passenger Revenue in combination, we are of opinion that these revenues are too optimistic and not likely to be realized. They are based:—

(1) On populations which do not yet exist, and hence are at least uncertain; they are

(2) Higher than most roads of general similar passenger type now in operation, and are second only to those operating out of very large cities where the riding habit is higher, they

(3) Expect passenger revenues per capita, especially on the interurban portions, which are in excess of those of some of the best passenger earning roads, operating out of cities like Detroit and Cleveland, and they

(4) Expect to obtain these high earnings within the first year of operation compared with electric roads which have developed their business over a period of from 10 to 20 years.

(d) Freight Revenue

A large portion of the revenue of the Hydro Radial System is expected to be derived from freight business. The estimate of the Hydro Engineers, submitted in October, 1920, showed expected revenue from this source to be 35.6% of the whole for the year 1925; Mr. Arnold's estimate showed 30%.

The basis of computing the freight revenue has, in both cases, been almost entirely out of population and, like the passenger revenue, it is computed on the expected population in 1925. In this manner it too depends upon the increase in populations, such as shown in the previous table.

At various times during the periods of investigation the Hydro Engineers made surveys of the area in different localities to endeavour to find the amount of freight moving, and from this to make an estimate of how much the Hydro Radials might expect to obtain in the way of business as their proportion, in case they were constructed. In the preparation of the original estimates by the Hydro, we consider that too much dependence was placed on the result of inquiries and surveys by men sent through the territory in question to inquire and ascertain this probable freight expectation in carload and less than carload classes. Too little attention was given, so far as we can see to endeavouring to obtain statistics of the actual freight business being done in the territory by the existing steam and electric railway transportation facilities.

It was suggested in evidence that when making the investigation, the Hydro Power Commission could not obtain from the existing steam and electric railways operating in the territory anything like full details of the business they were doing as they would not disclose them, and

that so far as these were concerned they had to depend on the annual but somewhat incomplete public reports. Even after this inquiry was well advanced, and this Commission had obtained evidence and exhibits from officials of such steam and electric railways in the territory, the Hydro Engineers, including Messrs. Arnold and Sager, in continuing their own inquiries, do not appear to have availed themselves of this advantage.

On the other hand reliance seems to have been placed by the Hydro Engineers and by Mr. Arnold and his assistants mainly upon the local inquiries and surveys. While these were made with care and were continued even up to the closing days of the inquiry and submitted in evidence with some detail, the figures resulting in so far as the proportion expected by the Hydro Radials are concerned, seem to be higher than, and out of line with experience and the usual or rational mode of distributing freight, as for instance, between the different parts of the System. Reference might here be made to an error made in the process of apportionment in the case of Guelph, which was discovered near the close of the inquiry in Mr. Arnold's report, that such an error is a possibility by this method of survey and apportionment leads to the belief that such methods cannot be relied on. The existing railways have well established customs and customers, they have been a long while in possession of the freight field, and it is unlikely that they will readily submit to such division of the business as is indicated in this method of apportioning, especially in the carload and moderate haul business that the Hydro Radials expect.

It is natural, as in other phases of the inquiry, that comparable conditions on railways now in operation in the territory or elsewhere, should be examined to ascertain if any expected performance by this system can be deduced as to freight business. In some respects this has been difficult because there are hardly any electric railways that have been doing freight business that is even comparable in proportion to the high expectation of the Hydro Radials.

The fact is that many electric railways in the United States, appear to have tried to develop freight business, but according to the evidence only a few have succeeded in getting beyond an express, and what they call despatch freight business of like character. They all appear to have come up against the competition of steam roads in so far as carload and even a good deal of L.C.L. business, and unless they are in a very favourable position geographically for hauling freight into some exclusive territory or in acting as a switching medium, they have not found it encouraging. Several roads, e.g., Detroit United and Lake Shore Electric, find that if they could get a suitable route into the large terminals, as for instance, to the centre of Detroit or centre of Cleveland, over which to haul freight cars, and then get a suitable freight terminal therein, they would improve their position with regard to freight, especially in L.C.L. and express business. Certain roads have advantageous terminals of this nature such as the Northern Ohio in Cleveland, and the Terre Haute, Indianapolis and Eastern, at Indianapolis but it is to be observed that these are almost entirely for L.C.L. and express or despatch freight. On the other hand, the Chicago North Shore, which is very active in an endeavour to develop its freight business, not being able to get into the heart of the city, stops its freight at a terminal at the outskirts and distributes it into the city by motor truck.

But the Hydro Radials expect to do a great deal more than handle L.C.L. and Express business. The handling of carload freight, both short and moderate hauls, and even the handling of portions of long hauls with the intention of handling these cars to the steam road to carry to their distant destination, form a large and very necessary part of their expected business. In this carload freight they are bound to come very sharply into competition with the existing steam roads, and even with electric roads such as the Grand River and the Lake Erie and Northern, which work as feeders to the C. P. R. It is on this basis that they expect to secure what has been termed co-operation with the Canadian National Railways already referred to whereby, if the shipper agrees, they expect to carry long haul freight as far as possible on the Hydro System and then hand it over to the Canadian National to continue the haul. On the other hand, in the reverse process, the Canadian National is expected to carry its long haul freight to its destination within the Hydro territory. In other words, to quote the evidence of Dr. Reid, Minister of Railways and Canals of Canada, referring to the Hydro System, and more particularly to the N. St. C. & T. and Toronto Suburban, "Those railways were important feeders of the Canadian National Railways and....the freight would be interchangeable," and again referring to haul over the Canadian National, "we would take it over our line as far as we could.....we would take every foot of haul we could on our own line."

Referring to carload freight expectations attention may be called to Mr. Arnold's evidence in which, after speaking of frequent passenger service supplemented by frequent and prompt deliveries of less than carload freight, he says, "In addition, it is probable that as stated above, certain amounts of carload freight can be conveniently and expeditiously handled." From this Mr. Arnold apparently looks upon revenue likely to be derived from carload freight as a rather secondary matter.

Following is a statement of the revenue expected to be obtained from freight of all classes. Both estimates are given for comparison:

FREIGHT REVENUE EXPECTED IN 1925.

	Hydro Estimate	Mr. Arnold's Est.	
Toronto-St. Catharines Div.	$1,408,250	$1,092,000	
Toronto Eastern Div.	225,000	185,000	
Hamilton-Guelph-Elmira Div.	453,580	349,000	
Toronto Suburban (Guelph) Div.	276,400	126,000	
Niagara-St. Catharines & Toronto	514 327	505,000	
	$2,877,557	$2,257,000	Note (B)

Note (A) In the foregoing the freight rates used are those which were in effect on steam railways in the region of May, 1920.

Note (B) This figure of $2,257,000 will require to be reduced by $68,900, by reason of a mistake made in Mr. Arnold's estimates as to freight expected from Guelph, pointed out by counsel and corrected near the close of the inquiry by Mr. Sager, who was recalled and explained the nature and effect of the mistake (Page 12433). The discovery of so extensive an error near the end of the inquiry (almost accidentally discovered) raised some additional doubts as to the accuracy of the estimates, particularly in this matter of apportionment already referred to. It should be added in fairness that Mr. Sager made a further hurried examination of the Arnold estimate and found no other errors of like nature.

FREIGHT REVENUE PER ROUTE MILE EXPECTED IN 1925

	Hydro Estimate (on 323 miles total route)	Hydro Estimate (on 288 Route freight) Miles for	Mr Arnold's Estimate (on 288 Route freight) Miles for
Toronto-St. Catharines Div.	$19,360	$19,360	$14,800
Toronto Eastern Div.	5,110	5,110	4,200
Hamilton-Guelph-Elmira Div.	6,171	6,171	4 800
Toronto Suburban (Guelph Div.)	4,021	5,025	2,300
Niagara St. Cath. & Toronto	7,994	10,700	10,500
Average over System	$ 8,909	$ 9,990	$ 7,800

These existing roads will have freight route mileage of less length than passenger, viz., about 55 for Toronto Suburban and 48 for N. St C. & T.

With reference to the foregoing tables it is to be observed that unlike the passenger revenues Mr. Arnold does not closely agree with the Hydro Engineer's expectancy in freight revenue. Mr. Arnold expects a total freight tonnage per year on the entire system of 1,210.000 in 1925. of which 985.300 will be carload tons and 224,700 L.C.L. tons, from which he hopes to get revenues of $1,281,000 and $976.000 respectively. In the case of the Hydro estimates the expected tonnage was approximately 1,635,000 tons, of which about 1.032,000 was carload, and 603,00J L.C.L. (after making arbitrary adjustment of N. St. C. & T.) It is thus seen that Mr. Arnold, while expecting a less total tonnage than the Hydro estimate is assuming a larger proportion of carload freight. It is in this feature, the more uncertain element of freight earning possibility, that doubt is most likely to arise where the Hydro Radials will be in such keen competition with the steam roads that are specially interested in retaining their long and moderate haul carload freight business.

The rates at which it is expected to carry freight are an important factor. Rates which would be obtained for L.C.L. freight would, of course, be comparatively high and much discussion arose as to the probable average per ton mile. It is to be expected that good average rates can be obtained for this class of business as it is in this that the electric railway can best compete with steam roads, the speed and frequency being advantageous. Mr. Arnold expects to obtain earnings on L.C.L. at rates varying from $3.64 per ton on the Toronto St. Catharines, and $4.05 on the Toronto Suburban down to $1.99 per ton on the Niagara-St. Catharines and Toronto, the difference being, of course, due to classes and length of haul.

The retention of the freight rates of May, 1920, as a stable basis for future business is none too certain. It is true that prices today are higher, but they will doubtless return, and possibly in time, to figures below those of May, 1920. In this varying process a road which is run "at cost" must be careful that it may not be forced to keep its rates up, and thus drive away business to competing roads. The ultimate lowering of freight rates will doubtless have to be faced throughout the country; in considering this, while there might possibly be a corresponding reduction in cost of freight, at operation, it was brought out in evidence that it would be at a much less proportion than the lowering of the rates.

In carload freight the situation is more complex on account of the long haul question referred to, and the conditions of competition that will be bound to rise. On the Toronto-St. Catharines line, with 72 miles length, Mr. Arnold expects an average of 85 cents per ton revenue. It is expected that a large part of such carload freight will be low class, such as coal (of which Toronto, for instance, uses about two million tons annually). Not only must all the anticipated L. C. L. freight be secured, but the entire carload freight, the more difficult to obtain, is equally essential to make the system pay (Mr. Gaby and Mr. Sager). The system can only pay if, to the usual traffic of an electric railway doing (interurban and suburban passenger and L.C.L. freight and express) there is added a large amount of carload freight. From the competitive point of view there was much evidence as to what the effect would be on the carload business by the Hydro hauling over its own lines and then handing cars to the steam roads for long hauls. Such an arrangement involves a double freight rate and other complications which shippers (Messrs. Hogg and Watts) said were undesirable from their standpoint.

The Hydro Engineers and Mr. Arnold and his assistants have, as before stated, built up the whole expectation of freight tonnage of both classes upon the basis of tonnage per capita. From all the evidence submitted this appears to be a basic assumption not only novel, but at variance with practice and traffic experts. Mr. Gaby and Mr. Hewson both stated that they introduced it in their computations by analogies with tonnages carried on roads in operation and Messrs. Arnold and Sager followed this method and brought new figures in an attempt to justify the rates used. All other witnesses, those actually engaged in freight traffic, said this was not the practice and that they could see no relation between freight and population on any railroad doing a mixed local and through freight business. In our opinion, in view of the evidence, there does not appear to be any relation which can definitely be set up because of the great difference in occupation, character and location of the population and the resultant nature of the communities in which they live and work. To quote Mr. Gutelius, "It would depend on whether that population is engaged in an industry which creates traffic or whether it does not." Also Mr. Bailey says, "I have never been able to establish any connection between freight revenue and the population." Mr. Coen says "Population is not a controlling factor in freight earnings." Mr. Gutelius also observes that railway men would not go into a railroad proposition on the basis of assuming how much freight may be reasonably expected from a given population, and that population is not necessarily the source of freight, and he also says again, referring to this, "I do not feel that that is the way to arrive at the volume of freight any more than it would be if you said that there were so many red headed people in a certain district and they ought to give you so much freight because of the color of their hair."

The proportion of freight expected to be obtained for the system from each locality to be served by the Hydro Radials has been arbitrarily fixed in the freight survey and largely by the person who made the survey as already described. This at best could be only a guess based upon such general information as might be gained by personal interviews with shippers. It does not follow that in actuality, after the Hydro System is in operation the expected proportions will be obtained even if promised in advance by friendly and public spirited citizens. Many factors

enter into the processes of how shippers will route their goods, and into questions of local or other advantages.

Referring for instance, to Mr. Arnold's report, it has not clearly been shown why the Hydro System should expect in towns like Galt, Preston and Hespeler, to secure 65% of the carload freight to and from the N. St. C. & T. District (as St. Catharines, Welland, etc.), amounting to the large tonnage of 17,600 per year (table B-14); or why, in cities and towns like Kitchener, Waterloo, Guelph and Oshawa, they should get 50% of the total carload freight moving to St. Catharines, Niagara Falls and Welland (Table B-14) based on the survey of 1918, and involving for these four towns a total expectation of freight of 38,600 tons at a rate varying from 0.72 to 1.33 tons per capita. All of these cities have active steam roads, both National and C.P.R., and as for Oshawa, Mr. Bell of the General Motors, the largest industry, says that 75% of their motor output shipped within a radius of 150 miles, goes out on their own wheels. So, also, it is asked why should the Hydro System expect to carry carload freight destined for the United States out of Kitchener and Waterloo, 15% of whole, viz., 26,500 tons (Table E-11) or out of Guelph 15% of the whole, viz., 11,200 tons (Table E-12) or out of Galt 20% of the whole, viz., 12,400 tons (Table E-13) or out of Oshawa 15% of the whole, viz, 11,200 tons (Table C-8). Or why should carload freight destined to be taken from cities like St. Catharines and Welland to the extent of 33⅓% of the whole, viz., 24,000 tons (Table B-14). At all of these places there are the regular steam roads, the National, the C. P. R. and the T. H. & B. whose great aim is to secure long haul carload freight.

As to Toronto carload business in coal, for instance, Mr. McGill, a coal dealer, testified that 90% of the dealers in Toronto have their coal come from the frontier over the G. T. R., and he further said that if the Hydro Radials carried any of this tonnage they would have to hand it to consignees in Toronto over the G. T. R. sidings.

As to the hope of the Hydro Radials obtaining the various expected proportions of freight business as indicated, it must be borne in mind that it proposes to come into the field as an entirely new transportation system. It is clear that in Toronto, however favourably situated in location along the front, it has to compete with industrial and other sidings already there, established by the steam roads many years ago (the number of these has already been given elsewhere). So also with entering other cities and towns. It is true that in the case of the Niagara, St. Catharines and Toronto, the Hydro Power Commission proposes to buy a going concern, and so also to buy the Grand Trunk branch, Galt via Kitchener to Elmira, but it is not yet clear what actual working conditions may be imposed as to interchange, and use of industrial sidings. In the group of towns, Galt, Kitchener, Preston, Waterloo, etc., the steam railways are thoroughly established, and they will not easily relinquish any portion of their freight business.

With regard to expected freight revenues we conclude from the foregoing that they are too speculative and, under the conditions in which the Hydro Radial system will have to operate, cannot be expected to be realized. The method of computing freight tonnage on population does not appear practical, according to the evidence, and it is unwise to depend solely on this method. While the freight survey in the cases where thoroughly made, is most useful, it is insufficient in itself and should be supplemented or supported by actual tonnages moving on other railways in the region. The arbitrary manner in which various guesses were made as to the proportion of freight likely to be secured in each town, seems an unsafe procedure, especially where the margins concerned are so slender as the expectations of this system are shown to be. The expectation that the Hydro Radial System will suddenly enter each of these cities and towns as a newcomer, and as it has been expressed, "elbow its way" into the local freight business to the extent expected against established roads, appears highly improbable of attainment for some years to come.

(e) *Operating Ratio.*

Operating Ratio is a term applied to the ratio between operation costs and total revenue. Mr. Friend, Auditor of the Canadian National Railways, says it is "what it costs to do the work for every dollar earned." For certain purposes, it is of little value, at all events so far as this inquiry is concerned, as for example in a comparison of net earnings, but for one purpose it seems to us of importance. In recent years this operating ratio has steadily and consistently risen on electric railways until now, according to the general testimony of the experts, it has arrived at a point, namely about 65 to 70%, below which they do not see how it can be bettered

in the near future. If for safety's sake we take a minimum of 65% and compare it with the estimated operating ratios which the Hydro in their estimates indicate for their first year of operations in case the radial railways are constructed, it seems significant.

The Hydro Radials proposed operating ratio for the entire system is 55.7%. Such a remarkable divergence between expectations and existing facts could only be anticipated with any show of reason, as a result of one or other of two things, namely, lower operating costs than usual in practical experience, or higher anticipated revenues than are found under existing conditions. Both these lower costs and higher revenues are found side by side in the Hydro Estimates.

The expectation of such an operating ratio would seem to be contrary to experience, and impossible of attainment. When a new system of Electric railways is under consideration, and it is found that their estimates and proposed operations are such as to cause them to expect and fix 55.7% as their anticipated operating ratio in the first year of operation of the system, or as low as 48% on one division (the Toronto-St. Catharines), it at once attracts attention and raises doubt.

Considerable criticism of experienced experts has led to the belief that the operating ratios should be increased and the question arises as to how this may be done. It cannot be through the decrease of operating expenses below what is generally accepted as normal rates on existing roads; there is no reason to expect that this road will be operated more cheaply than the average of existing roads whose experience is actually available and not speculative. It is not through the increase of revenues, for there is nothing in the project beyond the combination of a variety of business which will make the system unique, and like nothing "yet seen anywhere else" that would justify anticipated revenues so in excess of those on roads through territories at all comparable.

The expected Operating Ratios of the System and its divisions as put forward by the Hydro Power Commission in September, 1920, and Mr. Arnold in May, 1921, are as below:

EXPECTED HYDRO RADIAL OPERATING RATIOS
FOR THE YEAR 1925

	Hydro Estimate	Mr. Arnold's Estimate
Toronto-St. Catharines Division	48 %	51.6%
Toronto Eastern Division	49.5%	53.4%
Hamilton-Guelph-Elmira Division	61.2%	65.7%
Toronto Suburban (Guelph) Division	64.7%	76.7%
Niagara St. Catharines & Toronto	65.6%	72.1%
AVERAGE OVER SYSTEM	55.7%	60.6%

As already stated it is difficult to compare the performance of two electric railways by means of their operating ratio, as much depends upon conditions surrounding their operation, the territory through which they pass, the nature of their business, etc. At best, however, there are not very great differences in most roads of a high class doing an interurban and suburban business along with some freight. This will be seen in the table below of various roads in Canada and the United States. In connection with the operating ratios of these operating roads it is to be observed that in evidence Mr. Rodger said (7608), "I think the day of 50% operating ratio is not in sight," and Mr. Todd (11916) says "If you wanted me to give the last limit I dare, I would say 65 to 67 would be about as low as I dare take a chance, excluding taxes." He also says he does not know of any roads that are doing 55 per cent.

OPERATING RATIOS ELECTRIC RAILWAYS IN CANADA AND UNITED STATES
(Excluding taxes)

CANADIAN ROADS:	Per Cent.	
1919 Hamilton (Radial) to Brantford	62.7	Coleman
1920 London & Port Stanley (without Park)	68.8	Richards
1919 Niagara, St. Catharines & Toronto	74.7	Friend
1920 Lake Erie & Northern	75.5	Kirkwood
1920 Grand River	78.9	Kirkwood

AMERICAN ROADS:

1920	Terre Haute-Indianapolis	60.0	Rifenberick
1920	Detroit-Toledo	65.2	Rodger
1920	Lake Shore Electric	70.4	Rifenberick
1919	Union Traction	72.0	Feustel
1920	Washington-Baltimore	73.3	Price-Waterhouse
1920	Chicago North Shore	76.8	Thompson
1920	Detroit-Rapid	76.9	Rifenberick
1920	Detroit-Jackson	78.3	Rodger
1919	Indiana Service Corporation	79.0	Feustel
1920	Buffalo-Niagara Falls (High Speed)	79.3	Chavel

From the foregoing table of roads already described and discussed herein, it is obvious that the Hydro Radial expectations of Operating Ratio are entirely out of line with existing roads in practical experience.

It is evident that considering the foregoing roads, the operating ratio need have no relation to the net earnings as the operating ratio may vary from 60 to 80 per cent. and yet the net earnings may be the same. The point is, that to get an extreme operating ratio, very low (or very high), there must be corresponding extremes in either total revenues high (or low) or operating costs low (or high). In the case of the Hydro Radial project these extremes in their expectations have already been pointed out and by comparing the two estimates submitted it is evident that Mr. Arnold realized these inconsistencies when he uniformly raised his operating ratios above the Hydro estimates to the extent he did.

In our opinion the expectation of realizing such low operating ratios, in either estimate in the light of experience, raises grave doubts as to the correctness both of the operating expenses (which should doubtless be higher), and secondly, anticipated revenues (which doubtless should be lower). If both of these were adjusted to conform more to real experience, the operating ratios would undoubtedly be very much higher and more in line with practice.

(f) Fixed Charges and net Income:

As previously stated, the proposed costs for construction are exceedingly high. This immediately loads the project with very high fixed charges for interest. At this time and for some years to come interest rates on bonds issued or endorsed even by such a wealthy province as Ontario, will be at a high rate, at least 6% as now, and, according to recent experiences in sales and the evidence given, this may be appreciably exceeded. This condition of high fixed charges was recognised by Mr. Arnold, when, in making his estimates submitted to this Commission nine months after those of the Hydro engineers, he reduced the construction costs of the project put forward by them by 15% owing to declines in prices of materials and labour which he expected would be in effect if the project were proceeded with. On the other hand, Mr. Arnold, recognising what, in his opinion, were defects or omissions in the original Hydro project felt it necessary to make large additions in the costs on this account (e.g. Toronto subway terminal and double tracking) and thus brought back the fixed charges to an amount practically the same as the Hydro's. (In the case of his Supplementary Report, which is based on the same plans as the Hydro's, these later additions are not included and his fixed charges are consequently less.) The comparisons of the fixed charges in the Hydro and Arnold estimates are shown as follows:—

FIXED CHARGES FOR YEAR 1925.

(Includes Interest at 6% & Taxes; Excludes Depreciation).

	Hydro Estimate	Mr. Arnold's Estimate
Toronto-St. Catharines Div.	$1,307,573	$1,246,000
Toronto Eastern Div.	580 851	619,000
Hamilton-Guelph-Elmira	441,573	370,000
Toronto Suburban (Guelph)	182,126	220,000
Niagara-St. Catharines & Toronto	272,774	265,000
TOTAL FOR SYSTEM	$2,784,897	$2,720,000

It is to be pointed out that again Mr. Arnold has brought out his total to almost the same as that of the Hydro, although differing materially in details. As above noted, the differences relate mainly to Toronto, especially to the Terminal subway scheme for which the increased fixed charges are divided amongst the divisions to use it; this tends to wipe out the advantages of the general reduction of costs over the whole system.

It is also to be pointed out that the interest charges on the two lines proposed to be acquired from the Dominion Government are very low compared with the other lines to be newly constructed. This is significant of the cheaper cost of the lines now actually operating compared with new ones on which so much money is proposed to be spent. The total fixed charges of the Hydro System (as in Hydro Estimate) are 34.4% of the Total Revenue. This is significant of the high relative cost of the project and forms a very great burden on the financial possibilities of the system. It is very marked when this figure is compared with those of other high class systems, for instance:—Washington-Baltimore in 1919 had a similar ratio of 19.5%; Lake Shore in 1919 had 21.1%; Union Traction 1919, 28.6% and Northern Ohio, 1919, 15.1%.

The Net Income or Surplus arising from the operation of the proposed System are, under any circumstances, comparatively small. The Hydro Estimate submitted in October and September, 1920, and against which much criticism was offered for its high revenue, low operating costs and high fixed charges, brought out a net income or surplus of about 10% of the total revenue or "business done". Mr. Arnold, in his estimate, submitted in May, 1921 with lower revenue, higher operating costs and slightly lower fixed charges, brought out a net income of only about 3.3% of the total revenue, and when still further reducing this by reason of the mistake made in the revenue (as explained by Mr. Sager on his recall in evidence before the Commission at the termination of the inquiry) *this is only* 2.9%, *an exceedingly small margin.*
farm produce more extensively than at other seasons. I am unable to distinguish between truck-

Following are statements of Estimates by both Hydro and Mr. Arnold to bring out the respective Net Incomes. In considering these together it is to be borne in mind that while there appeared to be no definite adoption by the Hydro Commission of Mr. Arnold's differing scheme and estimates, this was put forward by the Hydro Commission as a later and more considered opinion of a staff of engineers which had been working on the revision of the scheme for some nine months since the start of this Inquiry, and we believe it to be intended to be so considered. We have thought it fair, however, to deal with these in conjunction wherever possible.

HYDRO COMMISSION'S ESTIMATES. REVENUE. OPERATION AND NET INCOME FOR YEAR 1925.

	Total Revenues	Operating Costs	Fixed Charges	Net Income
Toronto-St. Cath. Div.	$3,152,926	$1,514,905	$1,307,573	$330,448
Toronto Eastern Div.	1,190,000	589,411	580 851	19,738
Hamilton-Elmira Div.	1,322,027	809,045	441,573	71,409
Toronto Suburban Div.	1,040,468	673,326	182,126	185,016
Niagara, St. Cath. & Tor.	1,378,520	904,655	272,774	201,091
	$8,083,941	$4,491,342	$2,784,897	$807,702

MR. ARNOLD'S ESTIMATES

REVENUE, OPERATION AND NET INCOME FOR YEAR 1925

	Total Revenues	Operating Costs	Fixed Charges	Net Income
Toronto-St. Cath. Div.	$ 2,871,000	$1,480,000	$1,246,000	$ 145,000
Toronto Eastern Div.	1,306,000	697,000	619,000	10,000 Def.
Hamilton-Elmira Div.	1,065,000	700,000	370,000	5,000 Def.
Toronto-Suburban Div.	867,000	654,000	220,000	7,000 Def.
Niagara-St. Cath. & Toronto	1,413,000	1,019,000	265,000	129,000
	$ 7,522,000	$4,550,000	$2,720,000	$ 252,000

Def.—Deficit.

Note:—From this Total Net Income there should be deducted $34,450 due to an over estimate in Freight Revenue which Mr. Sager (Page 12,433) explained in evidence (being 50%

of an error made in Guelph.) *This will reduce the Net income in Mr. Arnold's Estimate to* $217,550.

In addition to the foregoing there is still another estimate, Mr. Arnold's "Supplementary," which is worked out on the same basis and scheme as the Hydro Engineers but in so far as Toronto and the lines leading into it are concerned has not the advantage of Mr. Arnold's Subway Terminal but provides for a surface loop scheme at Bay Street. This naturally provides for less capital cost and fixed charges with less resulting revenue and less operating costs than the former. By this scheme the Total Net Income for the entire system is even less than that provided for in Mr. Arnold's Main Report, that is to say: For Toronto-St. Catharines Division a Net Income of $151,000 (or $6,000 more income); For Toronto Eastern a Net Deficit of $62,000 (or $52,000 more deficit); For Hamilton-Elmira Division a Net Deficit of $5,000 (the same); For Toronto Surburban Division No. Deficit (or $7,000 less deficit) and for Niagara-St. Catharines and Toronto Division a Net Income of $129,000 (the same) or a Total Net Income for the Entire System of $213,000. From this as before there must be deducted the $34,450 in error and the corrected Total Net Income under this "Supplementary" Scheme reduces to the small amount of $178,550.

Comparing the two foregoing tables of Estimates the essential differences on which Mr. Arnold based his very material reduction of the Net Income can readily be seen in the light of the previous explanations. This great reduction made by Mr. Arnold again discloses the difficulty which he and his Assistants found in reconciling various estimates and factors presented in the Hydro Estimates which had already been brought to the attention of this Commission in October, 1920. These differences too assist in understanding the statement made late in his evidence by Mr. Arnold when referring to studying and approving the Hydro project and estimates, (Page 9993) "I started out with no intention of approving them; in fact I was quite sceptical and thought I would have to turn it down," and again Mr. Arnold in answer to the Chairman's question (page 9994) "What were the things you discovered which caused the changes in your initial view," answered . . . . "We found more freight, my recollection is, in some instances, but we did not find as much passenger business, as I recall it, and we found we had to make certain additions in investment here and there to carry the schedule we figured out, and figured with that additional schedule we would earn more money in spots, so the net result was, as I say, that it reduced the gross earnings in the Hydro estimates, as I saw them, and a somewhat increased operating expense on our part and a lower net than the Hydro Commission's figures as we saw them. I told you earlier that we had had a great many strong arguments with the Hydro people on their figures and landed on the best conclusions we could."

The foregoing should be read along with the final words in Mr. Arnold's Report in which he describes what he has arrived at as his "best conclusions" and these, considering that he could hope for a surplus only about one quarter of that expected by the Hydro Engineers, may reasonably be taken as the strongest endorsement he is able to make. " . . . . They lead to the conclusion that the project herein outlined as a whole is feasible and that if constructed and operated under competent management with the support of the communities served, its success can be reasonably expected." This conclusion speaks for itself.

It is fully evident that these expected amounts of net income do not present a rosy prospect for financial success even as they stand; a margin of 2.9% of surplus is a very slender inducement on which to embark on a project of such magnitude and the fact that it is to be owned and operated at the public expense is all the more reason that a conservative margin of surplus should be assured.

But it is much more evident from the foregoing discussion of the various factors which produce this small surplus, that even this is impossible of realization especially when all these factors are taken in conjunction or are acting simultaneously as they undoubtedly would. These various factors comprising cost of construction and fixed charges thereupon, passenger revenue, freight revenue and operating costs must all work harmoniously or consistently and it is only by such moderate and rational amounts or rates, in comparison with experience and performance of successful electric railway systems or the experience of men actually operating them that the probable financial success of this proposed enterprise can be measured.

With such dangerously small margins of Surplus or Net Income anything may happen. It is true that it is proposed to operate this system at cost, that there are no carrying charges

except interest on bonds or other borrowed money, and there are no dividends to be paid. But such a slender margin is too slight for reasonable safety and if the usual rules of business were applied in this to determine whether it is a sound financial project, it is quite obvious that it could not be looked on favorably or endorsed. There are too many chances for something to happen on the wrong side of the ledger. A 3% decline in the revenue would alone bring a deficit. A 5% increase in operating expenses would alone bring about a deficit. A moderate combination of both of these would easily produce a deficit. Even the increase in operation costs per car mile alone, of 1.5 cent would produce a deficit.

To enable the proposed electric railway system to be self-supporting, it would have to pay annual carrying charges on construction costs much higher than usual and would have to operate at annual operating charges much lower than normal, or than other experienced operating managers have been able to, are able to, or expect to be able to operate at. It would require to secure revenues, passenger and freight, but particularly freight, (after allowing all reasonable advantages attributable to the territory, the population, the rapid transit entrance to Toronto, the element of cheaper power, cheaper operation costs per car mile, smaller operating ratio, and the like,) which experience has shown have not been secured and will not be realized in any territory which can be regarded as at all comparable.

It appears to us in the light of all the evidence that such expectations could not be realized and the system, if constructed, could not be operated so as to be self-supporting.

XI. THE FUTURE AND POSSIBLE EXTENSIONS

In response to the requisitions by the Commission the Hydro Commissioners' Engineers prepared their estimates with a view to periods of time after the system is first put into operation. They assumed that the whole system would be into complete operation by the end of 1924, and that the year 1925 would be the first year of operation. They also, as requested, made estimates as for the year 1930, and 1935. In these, they showed, how in their opinion, it would be necessary from the business which they expected to develop to make certain additions in double tracking, equipment, buildings, etc. So also they credited the system with increased revenue dependent as before on the expected increases in populations in the two quinquennial periods. As in the estimates for 1925, freight revenue was anticipated in similar proportions in the various towns, the Hydro system expecting to gradually increase its business notwithstanding the competition of the steam and other railways. Generally speaking, this increase of revenue is uniform, the increases being roughly about 20% per five year period.

But the large question of future extensions lies further afield. The question is to what extent the system as now proposed will be extended to other localities and regions during say the first five year period.

If once the system were constructed it is reasonable to conceive an immediate demand being made by those municipalities on its fringe for extensions great and small and the question would at once be up as to policy in regard to these. It was said in evidence by Mr. Gaby that the Hydro Commission would, of course, not advocate an extension that would not offer good prospect of being self-supporting. This is the principle said to be followed in extensions to the present Hydro Power system. With respect to this, it is for consideration whether and how far the Commission or the Government might be able to resist insistent demands for such extensions or for an extension which, while not paying locally might be advocated as necessary for the general benefit of the system at large. It must be kept in mind that hundreds of miles of surveys with reports and estimates have been made throughout the Province. Having this in view it would be only natural that if and when a scheme so large and costly as this had received the financial endorsation of the Province, many of the municipalities would immediately request and insistently demand that a like assistance be accorded them.

The Government memorandum has raised this question in the light of possible extensions in different directions to widely separated localities. If such should happen it might be found to have committed the municipalities and the Province to a huge province-wide system, with uncertain results and far-reaching financial effects of a dangerous nature.

The Dominion of Canada is a country of great extent and resources. The Province of Ontario is a rich and prosperous one, and in the views of its citizens still the greatest province in the Confederation. The City of Toronto is having a rapid growth and expansion. Nothing

should be done in the way of too suddenly checking expenditures on public works of actual necessity.

The public expenditures to which the Dominion, Province and City are committed at the present time, run into a large sum:

The Chippawa Power	$60,000,000
Harbor Improvements	$25,000,000
Good Roads	$25,000,000
Toronto Clean-up	$32,000,000

(much of which may be said to be in the way of readjustment of securities and endorsations.)

Is it wise, however, in the face of all these, for the Province of Ontario to consent to pledge its credit to an additional $45,000,000, in connection with the project under consideration?

XII. HIGHWAY CONSTRUCTION AND MOTOR COMPETITION

In instituting this investigation, the Government intimated in its statement that "The Province is already committed to a good roads policy, involving a large expenditure." This expenditure, according to the testimony of Mr. W. A. McLean, Deputy Minister of Highways, is $25,000,000 during five years, on a total length of 1800 miles. The Province is going on with this enterprise on the understanding that the Federal Government will grant a subsidy of not less than $1,200,000 per annum and is also assessing the counties their respective shares of the actual construction on a percentage basis. In addition to this programme, the counties are spending, at the present time, $3,500,000 annually on county roads, and the townships are likewise spending $2,000,000 on township roads over and above the statute labor requirements. The above good roads extension has a marked bearing on the problem under investigation, inasmuch as the main Provincial Highways parallel the proposed radials throughout. From Bowmanville to Toronto, the Kingston Road is well within the area to be served by the Toronto Eastern. From Toronto to Hamilton, are the Toronto-Hamilton Highway, and the Dundas Road—one on either side of the proposed radial; from Hamilton to the frontier is a Provincial Highway serving the same centres as the radials; from Hamilton to Galt and branching to both Kitchener and Guelph is a highway running quite close to the radial most of the way. Construction will begin next year, according to the plans settled upon by the Government on a highway paralleling in a similar manner the Toronto Suburban.

Mr. Royce, Manager of the Toronto Suburban, testified that "We are suffering particularly now, from competition with the jitney service, a somewhat effective competition on both the Lambton and Dundas Roads. The local jitney service has effected local earnings in the neighborhood of $50.00 a day. This increased up to a year ago, but has been about stationary since then. There is not a very good motor road to Guelph, and a small amount of motor traffic there—nothing of a commerical nature." This will afford some indication as to the bearing of motor competition even where roads are not highly improved.

The testimony of Mr. George Parker, Superintendent of the Dominion Express Company, describes the operation of a trucking system into the very area in which the radial proposes to run between Hamilton and Niagara Falls, and shows that the service already effecting an economy, will improve with the completion of the High Way: "We have motor trucks operating between Hamilton and Niagara Falls daily except Sunday—2½ ton trucks. This service was introduced on March 1st, 1920. It has the advantage of being able to avoid extra handling of express matter. The cost for motor truck between Hamilton and St. Catharines is 34.5c per hundred weight—4.5c higher than the former joint service. The motor truck is the better service, and will be considerably improved when the highways are put into better shape."

It is well known that many people are now engaged in both Passenger and Freight business on the present Hamilton Highway. Mr. Wolfe Wilder told the Commission that he had been trucking for four years on that route, and had, in 1920, 20 trucks. He states that he carries goods for everybody—chiefly the wholesaler and manufacturer; that he handles goods for the Canadian Westinghouse, The Steel Co. of Canada, The T. Eaton Co., and made as many as two round trips in 24 hours, and has handled as much as 100 tons per day; and if the viaduct at Hamilton were completed, he could add a trailer.

Similarly Mr. H. A. Telfer of the Telfer Biscuit Co., says: "We have had a motor truck system in existence for four years. The benefits of this system as compared with the existing steam roads are:

(1) Actual saving in the cost of transportation 32c. v. $1.20 per hundred weight.

(2) Preservation of the product, less damage, less pilfering.

(3) Economy in the actual manufacture rolling stock.

(4) More efficient service, dependable, direct, prompt.

(5) Extended control of the product as handled by our own men and having no damage claims with transportation companies to settle.

(6) The elimination of shipping cases and trouble in the return of empties and extra warehousing for crating.

The extension of our motor trucking is contingent on better roads, which factor will also enable the use of trailers which may be dropped part way and picked up again on the return trip.

For Christie Brown & Co., Charles E. Edmunds, Gen. Manager, and Mr. Joseph Green, Transportation Manager, concur with the above testimony of Mr. Telfer, as to the economy and efficiency of the motor truck in their business. They state that they have been using the motor trucks since 1915; that as against a freight cost of $119.54 their truck cost was $91.07, including the return of empties; that there was no need for packing in wooden cases, thus saving labor and material. They had no need of freight lorries with sheds. They had no breakages or shortages and because no packing cases were needed, the shipments were 25% less in weight. As good roads extend, their trucking service will be extended; that with auto trucks they effect a saving as between two handlings and six handlings in the freight or express service.

Mr. A. W. Bell, Traffic Manager of General Motors at Oshawa, states that delivery of their motor cars for a radius of 150 miles is largely handled by what they term "drive-aways." That this effects an economy in freight and blocking; that it is not possible to ship their product to Toronto by rapid transit as proposed by the radials.

Mr. Donald R. Cowan, who instituted a research into motor trucking for the Department of Agriculture of Ontario, gave testimony that trucks are being used quite extensively in shipping of live stock adjacent to large centres, and that such stock arrived at the yards in better condition. He also gave instances of where trucks are becoming a factor in the handling of milk and fruit.

Mr. W. A. McLean, Deputy Minister of Highways, who has naturally been a close observer of the development of motor business on highways, stated in his testimony:

"I would say that within a radius of 50 miles from Toronto, there is a great deal of trucking of individuals and otherwise from all over the country around. It drops off during the winter months, depending on the roads. Between Toronto and Hamilton I do not think there is much falling off in actual motor truck use. There are more trucks on the highway perhaps in October than in any other month, because farmers are bringing in their apples, and other farm produce more extensively than at other seasons. I am unable to distinguish between such trucking and that for hire. It is a greater efficiency of service produced by the truck. By it you can have a piece of machinery from the factory into the point where it is to be used in three hours, whereas shipped by rail it may take from 3 days to 3 weeks. Very commonly the farmer for 50 to 60 miles, comes into Toronto in his own motor and brings his family. This is increasing very much."

That the automobile has already affected steam road revenues is indicated on the statement of Mr. G. C. Martin, Traffic Manager of the T. H. & B. Mr. Martin states: "Our Toronto Exhibition business this fall (1920) fell off about 25% from our local stations as far west as Waterford, Dunnville and those places. In reply to a questionnaire, the various Station agents stated that the falling off was almost invariably on account of automobiles; that people were driving in to the Exhibition and taking their friends."

Mr. W. F. Tye, an Engineer of wide experience in steam road operation, says: "The trucks are used on the good roads, and also for short distances on poor roads. I believe they are going to cut very seriously into the local earnings of the steam roads, and of the electric roads. It is a matter that the railway companies will have to take very seriously account of. With good roads, motor trucks would do the work which this hydro radial is designed to do; would do it

at a small fraction of the cost, and to a great extent better; that is, it would go right direct from the producer to the consumer."

Witnesses from the United States told of similar conditions in their country. Of those called by the Radial Railways Municipalities' Association, Mr. W. S. Rodger, General Traffic Manager of the Detroit United Railways, states: "I believe that by the end of this year (1921) the entire system will be paralleled by either concrete or good gravel roads. The auto has taken a lot of business from us. Concrete roads have unquestionably caused the residents along those roads to use autos to the exclusion of our cars. The riding habit has been largely diverted to the automobile instead of the street car or electric car to the extent that people are able to use the automobile."

Mr. W. H. Bunting, President of Niagara Peninsular Fruit Growers' Association, states: "Most of the fruit going into the Toronto Market is in heaped baskets, and requires considerable space to handle. The truck would not be able to carry enough of these baskets in that way, whereas a car, equipped with proper shelving can take sufficient quantity to make a carload lot, and carry it satisfactorily."

Mr. H. T. Foster, Fruit Grower at Burlington, says: "Some fruit growers have adopted motor truck service to Toronto. There is a daily requirement of extra service during the period of June to October."

Mr. Walter Jackson, Manager of the Electric Railway Journal, who made researches in connection with the motor truck and motor bus, says: "The great increase in the use of private autos, the jitney and motor bus has introduced a serious, although not a fatal competition to the electric railway."

"This is true of a great many interurban railways—not all. The competition of autos operated for revenue outside of the cities has operated as a detriment to the revenues of almost every kind of railway, including interurban. You cannot make it too strong."

Similar statements were made by Mr. F. P. Gutelius, Vice-President and General Manager of the Delaware, Lackawanna and Western Railway: "Good roads and the auto bus lines have become a factor in local transportation in all districts where good roads have been constructed. In the State of New York there are operating 22,572 auto busses, a great majority of which are handling the same character of business as is proposed by the Hydro Radial Lines. As road construction progresses, it is reasonable and logical to expect that bus lines will be inaugurated between all points where there is sufficient traffic to justify."

Mr. R. M. Feustel of Fort Wayne, Indiana, who operates the system known as the Indian Service Corporation, which owns 200 miles of city and interurban lines in Northern Indiana, and operates in addition, 86 miles in Indiana and Ohio, making a total mileage operated of 286 miles of city and interurban lines, combined, states: "Motor trucks are becoming a more important factor, along with the building of better highways in Indiana. They are becoming practically a problem for distances up to 25 miles. They have an advantage inasmuch as they back up to the jobber's door and take his L.C.L. freight and deliver it to the retailer in the small towns. They are developing a truck business that will be a real factor in competition. It is one of the new important factors and there is no doubt it has a place in rendering service."..... .....“Good roads in Indiana and the motor business are becoming a more important factor."..... .....

Mr. F. W. Coen, Vice-President, Treasurer and General Manager of the Lakeshore Electric Railway Company, with headquarters in Cleveland, states:—"I think the auto passenger car and auto truck are real methods of transportation that have to be considered with any method of transportation, electric or otherwise. They are here to stay as I see it. I see trucks and moving vans from all over the country, from 300 miles"..... .....“The Cleveland Provision Company have a distributing warehouse in Lorraine, and they handle all their stuff between there and Cleveland by truck. We used to handle all that stuff, but we do not get any more of it now"..... .....“That three out of every four of the Lakeshore people as far as Lorraine, travel by auto"..... .....“There is operating out of Cleveland today a regular truck line between Cleveland and Akron, 30 to 35 miles, and they keep running whether profitable or not."

"Good roads have cut into the business quite materially. We are hauling less people into Cleveland from the west of Cleveland into the city than ten years ago, notwithstanding that there are many more people there."

Mr. R. I. Todd, President and General Manager of the Indianapolis Street Railway Co., and also the Terre Haute, Indianapolis and Western Traction Company, says: "The motor truck business has been increasing. I do not think it is a profitable business, but I do not see any evidence of its dropping out."

The Commission, while inspecting the American Interurban roads in the New England States and the Middle West, were struck with the extensive use that was being made of motors. Everywhere the motor truck was in evidence on the highways, and to any observant citizen it is a self-evident fact that the automobile is cutting seriously into the receipts of all railways.

As an indication of how rapidly the use of the automobile is increasing, statistics show that whereas in 1910 in the State of New York, there were 62,655 automobiles, or 1 for every 145 people, in 1919 there were 597,542 automobiles, or 1 for every 18 of a population.

Ontario statistics give 4,230 automobiles in 1910, or 1 car for every 597 people, and for 1919, 138,288 automobiles, or 1 motor for every 20 people.

The Federal Electric Railways Commission, in its report to the President of the United States, on p. 4, paragraph 11, states: "The great increase in the use of private automobiles, the jitney and motor busses, has introduced a serious, although not a fatal competition to the electric railway. These forms of public motor conveyance when operated as public carriers should properly be subject to equivalent regulatory provisions."

Again on page 10, section 3, paragraph (1), we find this statement: "Automobile and Jitney competition.—For several years prior to the war, and to an increasing extent throughout the war period, and up to the present time, the automobile has proven to be a serious competitor of the electric railways rendering local transportation service. Jitneys and automobile busses operating as common carriers have been able in some cases, through the absence of sufficient public regulation, to engage in unfair and destructive competition with the electric railways for the most profitable part of urban passenger traffic. Strong as this competition has been, however, the electric railway industry as a whole has shown a very substantial increase in the riding habit. The operation of jitney busses as common carriers is much more restricted than the operation of private automobiles, but the jitneys have had a definite and intensive effect upon the street railway situation in particular communities, for the reason that they have engaged in direct and in some respects destructive competition with the street cars as public carriers. The experience of numerous communities, even before the extraordinary conditions growing out of the war, made it clear that unrestricted jitney operation, though more or less temporary and precarious in character, threatens the service, credit and solvency of the street railways."

Such statements, by representative men who have made an exhaustive study of transportation conditions in the United States, go to substantiate the value of the testimony of individual witnesses before this Commission. *It should also be pointed out* that not only the Federal Commission, but others recognize the need of some action being taken by the proper authorities to regulate these utilities which are growing in volume, in such a way that they *will contribute* their share in the up-keep of these rather expensive highways more especially so because of the fact that as the load increases, they will have a more detrimental effect upon these roads.

We might call attention to what may seem an ommission in the Federal Report. They seem to have made no reference to motor trucking. Possibly this is due to the fact that electric railways in the United States have not gone extensively into the freight business, and therefore have not felt this competition. From the evidence submitted throughout this investigation it is quite clear that the freight returns of the electric railways of the United States have been a comparatively small part of their gross revenue.

We cannot pretend, within the limited compass of such a report as this to note in detail every reference made by witnesses bearing on the subject of motor competition, but such references as are here made, may be considered to reasonably present all the facts. To sum up, it will be quite clear that the competition with the electric railways of traffic on highways and good roads, particularly that of motors and motor trucks, has grown to be so extensive as to be a factor of great financial importance in considering the projection of any system of railways such as has been proposed for this part of the Province.

XIII. (a) MEMO. AS TO WITNESSES.

1.—Certain Officials of the Hydro Electric Power Commission:—
F. A. Gaby, Chief Engineer.
T. U. Fairlie, Departmental Head in charge of Railway Engineering.
W. G. Hewson, General Railway Engineer.

2.—W. S. Murray, Consulting Engineer of New York.

3.—Officials of steam and electric railways in the territory in question:—
C. E. Friend, Comptroller of Canadian National Railways.
G. C. Royce, Manager of Toronto Suburban Railway.
E. P. Coleman, General Manager of Dominion Power and Transmission Company.
W. M. Neal, Assistant General Superintendent of Ontario District, Canadian Pacific Railway.
C. Bowker, General Superintendent, Eastern Lines, Grand Trunk Railway, Ontario.
M. W. Kirkwood, General Manager, Grand River Electric Railway and Lake Erie and Northern Electric Railway.
G. C. Martin, General Traffic Manager of the Toronto, Hamilton and Buffalo Railway.

4.—W. A. McLean, Deputy Minister of Highways for Ontario.

5.—George Parker, Supt. of Dominion Express Company.

6.—Railway Experts called by Radial Railway Commission:—
W. F. Tye, Consulting Engineer, Montreal.
F. P. Gutelius, Vice-President, Delaware & Hudson Railway, Albany, N.Y.
F. W. Coen, Vice-President, Treasurer and General Manager, Lake Shore Electric Railway Co., Cleveland.
Robert I. Todd, President and General Manager of Indianapolis Street Railway and Terre Haute & Indianapolis Traction Company.

7.—Dr. Reid, Minister of Railways & Canals, Ottawa.

8.—J. H. Gundy, Broker and Bond Dealer, Toronto.

9.—Henry H. Couzens, General Manager, Toronto Civic Transportation Commission, and E. L. Cousins, Manager, Toronto Harbour Commission and Chief Engineer.

10.—Special experts called by Mr. R. S. Robertson:—
L. A. Herdt, Consulting Engineer and Vice-Chairman Montreal Tramways Commission.
R. M. Feustel, Consulting Engineer, and President, Indiana Service Corporation.

11.—Bion J. Arnold, Special Expert, called by Mr. McKay, K.C.

12.—Motor Truck specialists:—
D. R. Cowan, (called by Mr. R. S. Robertson) and Walter Jackson (called by Mr. McKay).

13.—Certain Special Witnesses called by Mr. McKay:—
G. A. Cullen, Vice-President North American Fruit Exchange, New York.
C. E. Thompson, Assistant to President, Chicago and North Shore and Milwaukee Railway.
C. D. Cass, General Manager, Waterloo, Cedar Falls and Northern Railway.
A. Ellis (Carr, Ellis & Co., New York) Export Traffic Expert.
B. F. Wood, Consulting Engineer, of New York.
C. E. Lee, Operating Railway man.
C. A. Cheval, Auditor of International Railway Company, Buffalo.
T. H. Stoffel, Freight Transportation Engineer of Westinghouse Company.
C. L. Wilson, Assistant Manager, Toronto & York Radial Railway.
J. E. Richards, Manager, London & Port Stanley Railway.
W. S. Rodger, General Traffic Manager, Detroit United Railways.

14.—Statistical and Accounting and Technical Experts:—
C. E. Bailey (of J. G. White Engineering Corporation of New York).
F. A. Sager (Engineer with Mr. Arnold's Company).
R. B. Rifenberick, Consulting Engineer (formerly with Detroit United Railways).

15.—Certain other officials of the Hydro Electric Power Commission:—
Oswald Stanley, Engineer.
A. E. K. Bunnell, Engineer.

T. A. Wilkinson, Engineer..

W. R. Robertson, General Supt. of Hydro Railways.

16.—C. A. Matthews, Deputy Treasurer of the Province of Ontario.

17.—General local witnesses called by Mr. R. S. Robertson, 42.

18.—General local witnesses called by Mr. McKay, 54.

The Radial Railway Commission called the following witnesses:—Gaby, Fairlie, Hewson, Murray, Friend, Royce, Coleman, Neal, Bowker, Kirkwood, Martin, W. A. McLean, George Parker, Tye, Gutelius, Coen, Rifenberick, Todd, Dr. Reid, Gundy, H. H. Couzens, E. L. Cousins, Matthews and W. R. Robertson, 24.

Mr. R. S. Robertson called:—Cowan, Herdt, Feustel, Bailey and 42 local witnesses, 46.

Mr. McKay called:—Jackson, Cullen, Ellis, Wood, Lee, Arnold, Cheval, Sager, Thompson, Cass, Stoffel, Wilson, Richards, Rodger, Stanley, Bunnell, Wilkinson (recalled Fairlie and Robertson) and 54 local witnesses, 71. Total, 141.

XIII. (b). ESTIMATE OF WITNESSES.

1.—The weight to be attached to the evidence of Mr. Gaby, Mr. Hewson and Mr. Murray in support of the estimates, was in our opinion much affected by their inexperience in the practical operation of electric railways.

2.—The evidence of C. E. Friend, Comptroller of Canadian National Railways, G. C. Royce, Manager of the Toronto Suburban Railway, E. P. Coleman, General Manager of the Dominion Power and Transmission Company; W. M. Neal, Assistant General Superintendent of the Ontario District of the Canadian Pacific Railway; C. Bowker, General Superintendent of the Eastern Lines (Ontario), of the Grand Trunk Railway; M. W. Kirkwood, General Manager of the Grand River Electric Railway and the Lake Erie and Northern Electric Railway, and G. C. Martin, General Traffic Manager of the Toronto, Hamilton & Buffalo Railway; all officials of steam and electric railways actually operating in the territory in question, should be regarded as very important, and it cast the greatest doubt on the expectations that the proposed system of electric railways could be operated at such low operating costs or secure the revenue expected.

3.—The clear effect of the evidence of W. F. Tye, F. P. Gutelius, F. W. Coen, L. A. Herdt, R. M. Feustel, C. E. Bailey and R. B. Rifenberick lead to the same definite conclusions.

4.—The evidence of G. A. Cullen, Vice-President of the North American Fruit Exchange, New York; C. E. Thompson, Assistant to the President of the Chicago & North Shore and Milwaukee Railway; C. D. Cass, General Manager of the Waterloo, Cedar Falls & Northern Railway; A. Ellis, of Carr, Ellis & Company, New York, Export Traffic Expert; B. F. Wood, Consulting Engineer of New York, and C. E. Lee, an operating railway man, all witnesses called by the Municipal Hydro Electric Railway Association, or the Hydro Electric Power Commission, appeared useful to some extent for comparative purposes. Most of these witnesses, however, dealt with situations in or about such large population centres as New York, Chicago, Philadelphia to Atlantic City, and the like,and with reference to conditions such as can hardly be expected to pertain in and about Toronto, Hamilton, or elsewhere in the district in this Province in question for many years to come.

5.—Mr. C. E. Bailey, Mr. F. A. Sager and Mr. R. B. Rifenberick may be, to some extent, classified together as statistical, accounting and technical experts.

The evidence of Bailey and Rifenberick cast great doubt as to the expectations of the Hydro on the score of low operating ratio and high revenues. Mr. Sager in what is known as the Arnold report went into very great detail, as also in subsequent statements and summaries, with respect to population and freight and expected revenues.

6.—Mr. C. A. Cheval, the auditor of the International Railway Company, operating in Buffalo and from that city to Niagara Falls, indicated and testified particularly to the largely increased traffic secured on the direct double track line, connecting these two municipalities, and which was built some years ago in addition to an existing line which was not quite so direct. Nevertheless even such railways connecting the large city of Buffalo with the great scenic attraction of the Falls, with double tracks and long sidings and operated by Niagara Falls power, are found not to have been carried on with any too successful financial results.

7.—T. H. Stoffel described as a Transportation Engineer of the Westinghouse Company,

spoke of the financial difficulties of electric railways in the United States and the reasons therefor. He was somewhat optimistic that certain suggested improvements with respect to the handling of freight by electric railways would assist considerably in increasing the freight carried and thus add an important element to the revenues of electric railways.

8.—C. L. Wilson, Assistant Manager of the Toronto & York Radial Railway, gave some useful evidence as to the results of the operation of that railway.

9.—J. E. Richards, Manager of the London and Port Stanley Railway, dealt with its operations. There had been a steam road connecting London with Port Stanley with a roadbed, terminal facilities, sidings and the like. The Hydro Electric Power Commission built and equipped an electric road upon this roadbed, and it has been operated by Hydro Power. It is to some extent a switching board. It handles a great deal of coal brought in cars to the dock at Port Stanley, and taken from thence to London and on over other roads. It has certain park attractions at Port Stanley which have much increased its passenger revenue. In kind of construction and operation it is said to be somewhat comparable with the system of electric railways in question herein. It is owned by the City of London and operated by a Commission thereof. A rental of $20,000 a year is charged. It seems clear that if any reasonable estimate were made of the cost of replacing the roadbed, and if interest were charged upon the same the excess of the said rental would have resulted in the road running at a deficit up to the present time.

10.—W. S. Rodger, General Traffic Manager of the Detroit United Railways, who, like Cheval, Stoffel, Wilson and Richards, were called by the Municipal Hydro Electric Railway Association, or by the Hydro, gave useful evidence in comparing that railway with the proposed system.

11.—Oswald Stanley, A. E. K. Bunnell, T. A. Wilkinson and W. R. Robertson gave some useful evidence with respect to surveys and comparison they had made. The testimony of the latter was rather weakened by his lack of familiarity with his operation of the Sandwich, Windsor and Amherstburg Railway which is supposed to be in his charge as Manager of the Hydro Electric Railways.

12.—C. A. Matthews, Deputy Treasurer of the Province, furnished the Commission with statistics with reference to its debts and commitments.

13.—W. A. McLean, Deputy Minister of Highways, discussed the extensive plan with reference to good roads on which the Government has embarked, and told of the costs of construction thereof and the like.

14.—Following upon the obvious note of warning sounded by Mr. Clarkson in his report of the 19th of March, 1920, the evidence of J. H. Gundy, a financial expert of prominence, was very instructive. He spoke of the increasing rates of interest for money, of the disadvantageous effects likely to follow if any additions to the present commitments of the Province, in the way of new enterprises, involving such further large borrowings, were to take place. He also suggested the possibility of the credit of even such a rich Province as Ontario being affected. He pointed out the responsibility of Ontario for so large a part of the public debt of the Dominion of Canada.

In the final analysis, however, it seems to us that greatest reliance must be placed upon the evidence of actual operating experts of standing and experience. We regard the following as particularly to be regarded as in this class:—Gutelius, Feustel and Todd. We would also estimate Arnold and Herdt as high class experts. The evidence of all of these, with the exception of Arnold, leads to the inevitable conclusion that the construction of the proposed system of electric railways cannot be recommended, owing to the following reasons:—high construction costs, too low estimate of operating costs and too high an estimate of revenues.

Mr. Arnold, though it may be said that in the end he endorsed the feasibility of the scheme, or at all events did so with certain substantial changes which he suggested, was when he first came to consider it skeptical of its success. The last clause in his report is as follows:—"The entire electric transportation system and the character and scope of the service which it proposes to furnish, are all conceived along broad lines. While the system as a whole cannot be compared with any existing interurban system, combining as it does rapid transit, suburban and interurban passenger features, with dispatch and carload freight traffic, yet each of these classes of service has its parallel in existing systems, and when an analysis of the estimated

operating results of these various classes of service has been made, they lead to the conclusion that the project herein outlined as a whole is feasible and that if constructed and operated under competent management with the support of the communities served, its success can be reasonably expected." This, surely, is, after all, a rather hesitating and qualified endorsation. The greatest difficulty, however, in giving the weight which might otherwise be given to his testimony arose from the fact that the elaborate and voluminous report, which bears his name, was apparently largely prepared by his assistant, Sager, and that during the course of his evidence he had so frequently to appeal to, and be prompted by, Sager and the other assistants, as greatly to weaken his evidence. It seemed rather that while the Report bore his name it was substantially the work of others.

The cumulative weight of the destructive criticism of the scheme as a whole of Gutelius, Feustel, Herdt and Todd clearly must be given effect to as against the opinion of Mr. Arnold.

Several witnesses were called by Mr. R. S. Robertson to testify with respect to motor trucking Toronto to Hamilton, and elsewhere, and the actual competition of such trucks with existing railways.

He called several other witnesses to speak of the conditions under which such commodities as grain, livestock, and the like must be handled to give satisfaction as through freight.

He also called about thirty men who may be classed generally as municipal witnesses, Mayors, Reeves, Councillors, Treasurers, Clerks and the like. Their testimony was directed largely to complaints regarding the manner in which the by-laws were submitted in some of the municipalities, to the drastic character of Hydro legislation, and to features in the agreement which the municipalities were called upon to execute in connection with the project.

Fifty-six witnesses in all, from the various municipalities along the route of the proposed radials were called by Mr. McKay. They were representative of practically all the Departments of local activity, including real estate, manufacturing, wholesale business, professional and mechanical.

They clearly point out that the impetus which the use of the automobile had given to the development of the territory in which this road was proposed to run, had been impeded at the point where the steam roads were failing to give adequate service, more especially to those who are ordinarily classed as "commuters."

In the larger centres exclusive of Toronto and Hamilton manufacturers and business men reported that they were somewhat handicapped by reason of slow freight movements, and what they regard, also, as inadequate service in connection with fruit movements.

City people, anxious to get away from the congestion, had gone out for distances up to 20 miles, to establish homes where they might have the luxury of a small holding for garden purposes. At the same time they desire to maintain their city connection at the office or business or industry. To do this they are largely dependent on the steam roads, which roads have utilized, to some extent for this purpose, trains which handle through traffic, a feature which has been attended by occasional delays, and has caused these suburbanites to be late for their appointments. Naturally they have sought a more satisfactory arrangement.

Practically all of the area proposed to be served is suitable for fruit growing and gardening, a situation which calls for a prompt daily service during practically four months of the year. It is only fair to point out, in this connection, that to overcome this difficulty recourse has been had, according to the testimony of several witnesses, to motor trucks and steamboat facilities. The evidence will go to show that a large part of the area between St. Catharines and Lake Ontario, adjacent to the Niagara Central Railway, handle all their output for Toronto, by boat. West of Beamsville, the fruit for local consumption seems to be handled almost entirely by truck. So far as the fruit belt is concerned, there does seem to be a call for more expeditious service between St. Catharines and Beamsville.

The chief source of complaint on the part of these witnesses, so far as freight movements on the Niagara Central and its connections are concerned is that whereas a through rate obtained between that road and the T. H. & B., now that the Grand Trunk has become nationally owned, the only through route is via the Canadian National Railway. It is only fair in this connection to point out that so far as the Commission had information regarding the relationship which may obtain should the Niagara Central line be purchased as a part of the proposed system, it is open to question whether the existing relations will not be maintained.

In that rapidly developing industrial area lying south of St. Catharines, it was claimed that the present schedule of the Niagara Central did not give them the frequency in passenger service which they felt the district required, but witnesses from the southern terminal at Port Colborne made it quite clear that no matter what might be done with the present system, that they must have a direct connection to Buffalo, by means of a new line built as far as Bridgeburg.

Between Dundas and Galt is a fairly productive agricultural region, which has had recourse to the motor truck to transport its milk products to the City of Hamilton. It is claimed that the radial could serve these people more economically than the present method.

In Galt and beyond, we have a group of towns and cities most active in a variety of industries. Witnesses representing many of these industries indicate that outside of a few handicaps which might be removed by granting certain franchise rights, the district was fairly well served. It is rather significant that a number of the witnesses, real estate agents, point out the substantial advances which had already been made in property values owing to Highway improvement. Indeed, it was hinted by more than one, that such advances in themselves would pay for the proposed railway.

In view of the changed relationships since the present roads have become publicly owned, it would seem that no hardship could be wrought on any part of this territory if the present facilities were co-ordinated in a true public spirited manner.

XIV. ALTERNATIVE SUGGESTIONS

As, during the course of the inquiry, and especially near its termination, doubts began to arise as to the Hydro Radial project, as submitted being self-supporting as a whole, various possibilities as to alternatives came under review.

The natural question which first arises out of consideration of the projects put forward by both the Hydro Engineers and Mr. Arnold, is whether, if the scheme in its entirety cannot be self-supporting, can any portion of it be so? A glance at the general project and the various estimates of its five divisions immediately discloses the fact that the System cannot be dismembered. Each division is dependent upon others for both passenger and freight revenue to make it carry itself within the combination—in fact that is the basic principle of the scheme and one of the main arguments put forward to the municipalities which entered into the project throughout the territory.

To show the impossibility of dismemberment, take first for instance, the Toronto Eastern. It certainly could not be expected to support itself even with the best hopes for favourable conditions because even Mr. Arnold's estimates show the largest deficit for it ($10,000) in 1925 of any of the five divisions and the very much more optimistic former estimates of the Hydro Engineers allow it but the smallest surplus of all the five divisions (under $20,000). The same might be said of the Toronto Suburban to Guelph, for Mr. Arnold's estimate shows this up to be the next poorest with a deficit in 1925 of $7,000. Why and how the Hydro Engineers expect, according to their estimates to secure the large surplus of $185,000 out of this line in 1925, when it is at present operating at such a continuous loss has not been made clear. As to the Toronto-St. Catharines Division it might appear at first glance that it might have favourable possibilities as Mr. Arnold gives it a surplus of $145,000, and the former Hydro estimate, as usual much higher than Mr. Arnold, expects a surplus of $330,000; how these are not possible of attainment will be shown later. The Hamilton-Galt-Elmira division also shows a deficit in Mr. Arnold's estimates of $5,000, while the Hydro estimates claim a surplus of $71,000. As for the Niagara-St. Catharines and Toronto, it appears a bright spot because it is already a going concern, is operating now with a small yearly surplus, and Mr. Arnold expects a surplus in 1925 operation of $129,000 and the Hydro estimates show $201,000. These increases of surplus over the present are only consequent, however, on connecting this system up with the larger proposed one and are to be obtained only after spending considerable sums in addition to purchase price, on betterments. It is difficult of course to conceive of a situation which would offer inducements to purchase and operate this existing system by itself especially as the Dominion Government will not sell it without including the other two lines, the Toronto Suburban (being operated at a loss) and the half built Toronto Eastern which never has been operated.

If it were thought desirable to build the Toronto-St. Catharines Division alone, as being a trunk or through line, the fact that according to Mr. Arnold's estimate it was expected to

have a surplus in 1925 of $145,000 might at first make it appear a financial feasibility. It is to be observed, however, that within the revenue included on this line are large amounts expected to be derived from business coming to it off the Hamilton-Galt-Guelph-Elmira Division, the cutting off of which would deprive the Toronto-St. Catharines division of an amount of revenue over twice as much as the surplus shown while the reduced cost of operation would be only slight by comparison; the high fixed charges would remain almost the same. To give an idea what this means, it is to be noted that off the Hamilton-Guelph-Elmira line alone there is estimated, by Mr. Arnold, $140,200 for Interurban riding to and from Toronto. $11,500 for riding to and from Niagara Frontier together with $90,300 for freight to and from Toronto; $65.600 for freight to and from Niagara District and the frontier, assuming freight interchange with the N. St. C. & T. This aggregates a total loss to the Toronto & St. Catharines line of $307,600 on the showing of the estimates by Mr. Arnold without any consideration of either (1) the loss of business expected to come over the Toronto-St. Catharines line from the frontier and N. St. C. & T. System (which might largely go to the G.T.R.) or the extent to which we consider the whole revenue estimate will be lessened for the reasons already given.

Again, if it were thought that to this the addition of the other good earning division, the Niagara, St. Catharines & Toronto, were made, the combination does not appear so favourable on close examination. These two together might provide a complete Hydro owned and operated line from Toronto to the Niagara Frontier, costing $24,540,000 or over half of the whole project a similar condition would arise; these together would by Mr. Arnold's estimates, obtain a combined surplus of $274,000 in 1925. The earnings of both these divisions, would, however, without feeder lines, be reduced to an amount 30% greater than this combined surplus, and the whole is also still open to the general objections already raised to the optimism of the estimates. In addition to this the provisional agreement for the purchase of the N. St. C. & T. provides that it will not be sold by the Dominion Government, without the other two lines, viz., the Toronto Suburban and Toronto Eastern.

It is thus evident that taking the most promising divisions of the System they cannot be found to be as likely to be self-supporting as even the whole system.

To follow this sub-division further, it has been suggested that possibly the line joining Toronto and Hamilton might be considered financially feasible as providing for an attractive suburban and interurban business. There have been no estimates or figures submitted to the Commission on this Section nor are those already submitted for the Toronto-St. Catharines line in such form as to be segregated by dividing them at Hamilton. It does appear, however, that with the very high construction costs proposed on the Toronto-St. Catharines line, the fixed charges would be unduly large for such a short section and a cheaper form of road would be preferable. It appears too that with such a short section the road would have to depend largely upon passenger business and L.C.L. freight and express when again it would come sharply into competition with the steam roads, the motor transportation on the highway and the suburban electric roads at either end. Carrying this idea further to a rational conclusion, however, it is for consideration whether the joining up of the existing lines, now two sections with two gaps, and the rehabilitation of or improvement of these roads might not for the present serve a very useful purpose with reasonable economy. Such a course would be a matter on which the Province itself should not be called to enter, as it is rather for the terminal, and possibly the intermediate municipalities to work out an operative scheme to mutual advantage.

Some similar consideration might be given to the possibility of closing the remaining gap in the region between Hamilton and St. Catharines by joining the end of the existing electric railway at Beamsville to St. Catharines. Such a course, if adopted, would, as in the previous instance, require co-operation and traffic arrangements between the existing electric roads, independently of the municipalities or provincial government. It was shown in evidence that this had at various times been under consideration by the private companies.

In examining the project from all sides, however, and in viewing the evidence of the various witnesses, the estimates and reports, we are driven to the conclusion that the most obvious alternative scheme of a constructive nature lies in and about the City of Toronto. The whole Hydro Radial Project centres about this city which is the largest partner in the proposed co-operative scheme of the municipalities.

This was first brought to our attention by Mr. Gutelius in the course of his evidence in

which he considered that Toronto and vicinity should be treated separately from the rest of the project and that this area of separate treatment might extend outwards to a radius of say 15 miles or more.

Mr. Gutelius, in addition to his evidence, presented us with a report most of which was read into the evidence. The latter part, however, in the form of conclusions was not included in evidence in the same form, and on this account it is extracted in its entirety as follows:—

"FINAL CONCLUSIONS"

"After having made a personal examination of the various railways involved in this scheme and including the proposed lines to be constructed, and after having discussed the details with Engineer Fairlie of the Hydro-Electric Commission, and having studied the evidence thus far presented to the Commission, and having in mind the fact that many of the Municipalities have already voted upon this question, it would appear to me that the proper solution is as follows:

TORONTO EASTERN. Sell the line to the Oshawa Street Railway Co. or make an arrangement with them to operate it, or as much of it as appears to warrant and scrap the remainder.

Toronto to give the Kingston Road radial a rapid city connection and take care of Ward Eight in so doing.

TORONTO-ST. CATHARINES. Toronto to give the York Radial a rapid city connection at Sunnyside.

The municipalities to build or finance a single track line from Port Credit to Oakville, present lines to be improved for through service, and operate it in conjunction with or by the Hamilton and Toronto lines. The Government to guarantee the bonds if Toronto provides rapid city connection, and Hamilton do likewise.

Hamilton Railway lines to be extended direct to Burlington when business justifies.

Beamsville line to be extended through to St. Catharines—municipalities to build or finance and have it operated by the Hamilton and St. Catharines lines as can best be arranged, (Government to guarantee the Bonds).

Hamilton to Beamsville to be improved for through service.

IN GENERAL. Provide sidings and perform such local freight business as can be secured along the line same as is being done by the present lines—including express, milk, mail, etc.

TORONTO SUBURBAN. City of Toronto to give the Toronto Suburban a direct rapid transit line into the business centre of Toronto.

CITY OF TORONTO. City of Toronto to give the Metropolitan (Yonge Street to Lake Simcoe) a rapid transit line into the business centre of the city.

The Toronto rapid transit scheme for suburban traffic will require some such scheme as the Hydro have worked up, but I question the advisability of terminating them all at Union Station on account of congestion; better to have three smaller terminals near the business centre.

Should Toronto not undertake this task itself rather than add another factor to the present complication? It is a great undertaking and the detail is a city matter."

It will be observed that Mr. Gutelius has thus made certain suggestions, especially as to Toronto, some of which we have embodied herein. As we have ventured to suggest elsewhere, we do not agree with his proposals that the Province should endorse or guarantee bonds.

Later throughout the evidence of different witnesses and in several reports, especially that of Mr. Arnold, the constant reference to the advantages in and about Toronto tended further to centre attention upon its difficult transportation problems, and the great desirability for their solution. The local necessity for transportation, its possible co-ordination with the existing city and suburban lines and the high earning possibilities in suburban business which become apparent culminating in the favourable estimates for such in Mr. Arnold's report, all seemed to demand that some such constructive scheme should be formulated out of the various proposals and the mass of evidence and information obtained.

It became apparent too that inasmuch as the Toronto situation naturally separated itself from the rest of the project out in the province, it should be treated as a purely local problem, and worked out with the view that the City of Toronto should undertake the construction and operation as a municipal enterprise co-ordinated with the other undertakings of similar nature now in hand.

This alternative suggestion crystallizes into a purely radial scheme based on Toronto. The term "radial" which has become so definitely attached to the Hydro Radial Railway Project is peculiarly applicable to Toronto, and in fact the Project as put before us, obviously had its inception as conceived in and about Toronto because the larger scheme appears to have grown outwards from this centre.

This Toronto Radial Scheme has already had a constructive impetus in the recent negotiation, now believed to be almost consummated, for the acquisition by the city of the three privately owned suburban lines which are included in the so-called "Clean up" of the power situation in Toronto. These three lines being thrown into the scale are, in our opinion, very instrumental in not only emphasising the desirability of a purely Toronto radial project but in making possible the adoption of those portions of the larger Hydro Radial project which lie in and around Toronto. All of these in combination, three portions of the Hydro Radial lines within or close to the city and the three other lines about to be acquired, together can probably be merged into a practical and economical radial project to be operated in conjunction with the City of Toronto Street Railway System now also about to be acquired. We consequently suggest this as an Alternative Scheme.

This suggested scheme embraces first the use of the portion of the Toronto Eastern within the city which, in Mr. Arnold's Report, is called the rapid transit suburban section about six miles in length, out as far as the Don Valley crossing. This section, according to Mr. Arnold, if operated independently of the city (i.e. as a Hydro road) would produce a very good revenue from suburban and local sources; owned and operated by the city as a part of its city system, it should be even more remunerative.

The Toronto Suburban Railway to Guelph (while still remaining under public ownership of the Dominion) would have, as brought out in evidence, a great advantage, if given access for its interurban cars from Guelph (and also from Weston and Woodbridge direct or by transfer) down to the centre of the city. Such a connection is proposed under the plans of the Radial project and if this short section were built by the city from Keele street down the Humber Valley to Sunnyside, it would provide the means desired, and at the same time enable the City Street railway system to have a rapid transit line around the western part of the city similar to that already suggested for the easternside.

That portion of the Toronto-St. Catharines line as proposed within the city limits could be made immediately useful as forming the desired entrance to the city from the west. This would permit direct access to Bay street for cars coming in both from the west and the northwest as already provided for in the Hydro plan for this part of the scheme and would embrace the advantages already pointed out in this respect. It is obvious that the very costly construction proposed in the Hydro scheme cannot economically be followed, for such a line as this within the city, desirable though it may appear, would have the handicap of high fixed charges, and would be too heavy to carry. Construction might be arranged so that as business developed and warranted, improvements could be undertaken.

With the acquisition by the city of the Mimico Division of the York Radials, now operating from Sunnyside to Port Credit, a means is already at hand for serving that suburban portion of the city to the west of the Humber River. This line has, at present various structural disadvantages such as curves and wide gauge, and while its location on the highway may require slower speed as claimed, it has the advantage of offering more convenient access to the residents. Certain changes might be made in location and other betterments would be required to place the road on a good working basis comparable with other parts of the Toronto System. It is to be borne in mind that this division even as it now exists, is the best paying Suburban railway in the vicinity of Toronto.

It is here suggested that a logical course to be pursued is the construction of the missing link between Port Credit and Oakville; why this has never yet been done was not clearly brought out. Such an extension would serve not only the suburban locality and the town of Oakville which very much needs such service, but would permit a through electric car run from Toronto to Hamilton even as the lines now exist; this is without considering the possibility of a shorter line being built from Burlington to Hamilton when demanded. It is suggested that in order to bring about the construction of the link between Port Credit and Oakville, which ought to be built of high standard, there might be some local co-operation between the City of Toronto

(with its Mimico line when required) and the municipalities of Oakville and Port Credit and possibly the townships concerned. This is deemed by us to be purely a local matter and one in which the Province should not be called upon to enter.

As to the situation in the northern area of the city, which really does not enter into the plans of Radial project as presented to us, it is to be recognized that the Metropolitan Division when acquired must ultimately have provision for getting its interurban cars down to the lower part of the city in some such manner as already described for the eastern and western entrances. It is suggested that a connecting line might turn off York Mills, and running in the vicinity of the Don River connect at the upper end of the Eastern suburban (or Mr. Arnold's "Rapid Transit") line previously described as the city part of the Toronto Eastern Route. Such a plan, which we understand has already been under consideration by those concerned with city transportation matters, and which was referred to in evidence, appears to offer a solution for entrance of interurban cars from the north. This, too, is wholly a City of Toronto matter in conjunction with the adjoining county and townships, and being local is also one in which we consider the Province should not be called upon to enter.

The portions of these three proposed new roads within the city as described, would, according to Mr. Arnold's report, be by far the best paying portions of the Hydro Radial System, as they are all favourably situated for local and suburban business. These portions, including some extra lengths outside and adjoining the city, are together expected to earn a suburban passenger revenue of about $1,074,500 (see Mr. Arnold's report), or about 21% of the entire passenger revenue expected for the Hydro Radial System in 1925.

To this expected suburban revenue on new lines, there could be added additional passenger revenue and some light freight and express, for instance:—On the Eastern Rapid Transit, the interurban passenger and freight business coming down the Metropolitan, and the revenue to be derived from any branches which may be built (eastward) in conjunction with the City Service; to the Toronto Suburban connection by Humber Valley and Sunnyside, the similar interurban and freight business arising from the main line and certain business from the local city lines in West Toronto (and possibly Weston, etc.); to the Humber-Sunnyside line main line to Bay street (through the Exhibition grounds and Harbor Commission lands, the right-of-way for which is almost all already available to the city), the interurban business of passengers and freight coming in from Port Credit, Oakville, Burlington, and to some extent, from Hamilton.

The aggregate revenue that might be thus derived from this combination appears somewhat attractive, especially when it might be operated under one management, such as by the City Transportation Commission. The fixed charges for these lines should be much lower in proportion than those rendered necessary by the Hydro plans, mainly because of the low purchase price of the lower standard lines to be newly acquired compared with the proposed cost of the very high standard new lines considered to be necessary by the Hydro Engineers. The operating costs as put in by Mr. Arnold, taken in conjunction with those given in evidence for the York Radials, which seem to offer a favourable opportunity for economic operation, but more likely if placed under the one unified management of the Toronto Civic Commission because revised plans and operative arrangements may be worked out by it whereby both construction and operation costs may be considerably reduced.

The general question of the terminal station in Toronto is difficult to consider under any circumstances. It was early obvious that the proposal by the Hydro Engineers to discharge passengers at the waterfront was open to many objections, not the least of which was the lessened revenue to be derived by an inconvenient terminal. It was for this reason that Mr. Arnold proposed the subway terminal even at its great cost. Until the viaduct and other large transportation questions, which are purely the affairs of the City of Toronto, are determined, the question of terminal will probably have to be left unsettled.

In general, such a Toronto Radial Scheme as it might be worked out, appears to us to offer various advantages. It would supply an opportunity for a truly "radial" system of railways operating into the city from a suburban belt up to say 10 or 15 miles radius—this outer district might, as has been suggested, be formed into a greater Toronto District so as to secure unified transportation control by the municipalities themselves, apart from and free from any outside influence or interference.

This system would offer to suburban residents, workmen and others, who desire the advantages of cheaper homes and living expenses, a cheap and convenient transportation to the outer zone by means of a system wholly co-ordinated with the civic system; in this respect we consider that such commuters would have a better service than if under two separate transportation bodies operating under public ownership principles. It might be pointed out in this connection that remedy may now be more readily found for the so-called deficiencies of the steam railways in suburban business, because under their public ownership and operation, requests and insistence for, say, an extra train morning and evening where shown to be necessary in the interests of the public, will, doubtless be given heed to more readily than by a private corporation; the remedy lies with the Dominion Railway Board to assist in case of difficulty or reluctance on the part of the railway.

Such a unified transportation system would enable the Civic Commission to work out its own plans in conjunction with the problem of the street railway proper when taken over, and would not put it in the position of being a competitor with another transportation system operating within its area, such as the Hydro Radials might be. The civic system appears to have difficulties ahead in the ordinary course as to revenue, and Mr. Arnold in his evidence, from an intimate knowledge of the street railway problems in Toronto (from previous study) gave it as his opinion in his evidence before us, that the residents of Toronto were probably going to be confronted with a seven cent street railway fare. It does not seem reasonable to set up, especially at this juncture, another transportation system, which would in reality be in competition to some extent at least.

The necessary co-operation with the Toronto Harbor Commissioners would doubtless be more advantageously secured by another Civic Commission, than if a third were included.

All of which is respectfully submitted.

(Signed) R. F. Sutherland, Chairman.
(Signed) C. H. Mitchell,
(Signed) A. F. Macallum,
(Signed) W. A. Amos.

July 30, 1921.

APPENDIX 1

(Signed) "R. F. S."
SEAL (Signed) "A. F. M."
(Signed) "W. A. A."
(Signed) "C. H. M."

GEORGE THE FIFTH, by the Grace of God, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, KING Defender of the Faith, Emperor of India.

TO THE HONOURABLE ROBERT FRANKLIN SUTHERLAND, one of the Justices of Our Supreme Court of Ontario, BRIG. GENERAL CHARLES HAMILTON MITCHELL, C.B. C.M.G. D.S.O. C.E. LL.D., Dean of the Faculty of Applied Science and Engineering, University of Toronto, FRED BANCROFT, ESQUIRE, all of the City of Toronto in the County of York, WILLIAM ANDREW AMOS, Esquire, of the Town of Palmerston, in the County of Wellington, and ANDREW FULLERTON McCALLUM, Civil Engineer, of the City of Ottawa in the County of Carleton,

GREETING.

WHEREAS, in and by Chapter 18 of the Revised Statutes of Ontario, 1914, entitled "An Act Respecting Inquiries Concerning Public Matters," it is amongst other things enacted that whenever the Lieutenant-Governor in Council deems it expedient to cause inquiry to be made concerning any matter connected with or affecting the good government of Ontario, or the conduct of any part of the public business thereof, or the administration of justice therein, and such inquiry is not regulated by any special law, he may by Commission appoint a person or persons to conduct such inquiry and may confer the power of summoning any person and requiring him to give evidence on oath, and to produce such documents and things as the Commissioner or Commissioners deem requisite for the full investigation of the matters into which they are appointed to examine, and the Commissioner or Commissioners shall have the same power to enforce the attendance of witnesses and to compel them to give evidence and produce documents and things as is vested in any Court in civil cases.

AND WHEREAS Our Lieutenant-Governor in Council of Our said Province of Ontario deems it expedient to inquire into and obtain a report upon the matters hereinafter mentioned:

NOW THEREFORE KNOW YE that by and with the advice of our Executive Council of Our Province of Ontario, and under the authority of the hereinbefore in part recited Statute, and of any other power or authority whatsoever in US vested in this behalf, and having and reposing full faith and confidence in you the said HONOURABLE ROBERT FRANKLIN SUTHERLAND, CHARLES HAMILTON MITCHELL, FRED BANCROFT, WILLIAM ANDREW AMOS, and ANDREW FULLERTON McCALLUM, DO HEREBY APPOINT you to be our Commissioners in this behalf, with all the powers authorized by the said Act,

1. To enquire into and report upon the whole question of Hydro-Electric Railways, and all matters which in the opinion of the Commissioners are relevant thereto, with particular reference to the matters that are raised by and dscussed in the statement of the Government issued on the 6th day of July instant, a copy of which is hereto attached.
2. To make such suggestions and recommendations in connection with or arising out of any of the subjects indicated as in the opinion of the said Commission may be desirable.

TO HAVE, HOLD and ENJOY the said office and authority of COMMISSIONERS for and during the pleasure of our said Lieutenant-Governor in Council.

AND WE DO HEREBY APPOINT you the said Honourable JUSTICE SUTHERLAND to be Chairman of the said Commission.

IN TESTIMONY WHEREOF we have caused these our Letters to be made Patent, and the Great Seal of our said Province to be hereunto affixed.

WITNESS, HIS HONOUR LIONEL HERBERT CLARKE, Lieutenant-Governor of Our Province of Ontario at Our Government House in Our City of Toronto in Our said Province this twenty-first day of July in the year of Our Lord, one thousand nine hundred and twenty, and in the eleventh year of Our Rein.

BY COMMAND.

(Signed) H. C. NIXON,
PROVINCIAL SECRETARY.

STATEMENT ISSUED BY THE GOVERNMENT OF ONTARIO IN CONNECTION WITH CERTAIN PROPOSED HYDRO RADIAL RAILWAYS ON JULY 6, 1920

While the Government realizes the importance of rapid and economic transportation, and is much impressed by the case presented by Sir Adam Beck and the municipalities, it cannot disregard the many and serious problems involved in the proposals now presented for the purchase and construction of hydro-radial railways under Government guarantees, and having now reached a conclusion as to the action it ought to take in the matter, it conceives it to be its duty to give reasons for the course it proposes to follow.

THE LEGISLATION

Under the provisions of the Hydro-Electric Railway Act, 1914, and amendments thereto, the Commission is authorized to enter upon the construction (or purchase) and operation of electric railway lines when the municipalities interested shall, in respect of any proposed line, have signed agreements containing terms and conditions laid down by the Act, and deposited with the Commission debentures to the amount of their respective shares of the costs of construction and equipment of the line. The Commission then issues its own bonds guaranteed by the Lieutenant-Governor in Council. The bonds thus issued and sold are to all intents and purposes the bonds of the Province.

ROADS NOW BEING OPERATED

The only railways now being operated under this legislation are the Sandwich, Windsor & Amherstburg Railway and the Windsor and Tecumseh Railway.

These railways run from Tecumseh to Amherstburg through Ford City, Walkerville, Windsor, Ojibway and Sandwich, a distance of about twenty-five miles. They were acquired early this year by the Hydro-Electric Power Commission at the price of $2,039,000, which was paid by the issue of forty year bonds of the Commission guaranteed by the Province.

The report of the Commission for 1919 referring to these lines states that "The estimates indicate that some $250,000 will have to be spent to bring the lines into fair operating shape."

The Hydro-Electric Power Commission is also operating the Peterborough Street Railway, which was purchased by the Province in 1916, along with the Seymour Power System. In the report of the Hydro-Electric Power Commission for 1919 there is this statement:—

> "It was found that the service given was much better than supplied any other city of corresponding size, and that the revenue was really not sufficient to cover all legitimate charges."

In his report of last March respecting the Hydro-Electric Power Commission Mr. Clarkson states that this road showed losses in 1918 and 1919.

These are the only street railways at present operated by the Commission.

The London and Port Stanley line is owned by the city of London and operated by a local commission.

THE PRESENT PROPOSALS

The scheme now submitted for the approval of the Government covers the following lines to be built or acquired from the Dominion Government:—

(1) Toronto, Port Credit, St. Catharines Line:—	
Estimated cost of construction as revised by Mr. W. S. Murray, Consulting Engineer of New York City, and brought down to date	$ 22,298,635
(2) Toronto Eastern Railway—(Toronto to Pickering, Whitby, Oshawa and Bowmanville):—	
Estimated cost of construction, including right of way and partial grading to be acquired from Dominion Government at a cost of $706,000. (Estimates made in September, 1919)	8,360,794
(3) The Hamilton, Galt, Guelph, Elmira Line:—	
Estimated cost of construction (Estimates made November, 1919)	6,530,659

(4) The Port Credit to London Line:—	
Estimated cost of construction (Estimates made in 1916)....	8,499,769
(5) The Toronto Suburban Line (Toronto to Woodbridge and Toronto to Guelph):—	
(6) The Niagara & St. Catharines Line (Niagara Falls, St. Catharines and Port Colborne):—	
These two systems to be acquired from the Dominion Government at a cost of	6,170,374
	$51,870,231

It is suggested that the Toronto to Guelph link of the Toronto Suburban system may be substituted for the Port Credit to Guelph link of the Port Credit to London line, and that this would mean a saving of about $2.000.000 for construction expense. So that approximately the estimated cost of the proposed lines to be built or purchased is in round figures $50,000,000.

Sir Adam Beck has furnished to the Government the following memorandum with reference to the proposals now under consideration:—

TORONTO-PORT CREDIT-ST. CATHARINES RAILWAY

"Reports and estimates were submitted in the year 1915 to the municipalities between Toronto and Port Credit *re* the construction and operation of this section as a part of the Toronto to London line; by-laws were submitted in January of 1916, and for the section between Port Credit and St. Catharines, in 1917 and 1919, and were passed by large majorities.

"Fifteen municipalities have executed agreements with the Commission, authorizing the procedure with this work, and assuming the responsibility for the railway and its operation between Port Credit and St. Catharines, and have deposited with the Commission debentures for the full amount; the Commission has issued bonds to the exent of $11,360,363.00, all of which have been guaranteed by the Province.

"A great part of the engineering work has been completed in the final survey of these sections and the Toronto-Port Credit-St. Catharines Railway and right of way purchased between Toronto and St. Catharines to the value of $800,000.00."

THE TORONTO AND EASTERN RAILWAY

"In May of 1919 some ten municipalities in this district passed resolutions requesting the Commission to negotiate on their behalf for the acquiring of the properties owned by the Toronto and Eastern Railway, and to prepare reports on the completion of its construction and its extension to Toronto.

"An option on the property was obtained by the Commission; by-laws were submitted to ten municipalities from October, 1919, to January 1st, 1920, under the Hydro-Electric Railway Act, all passing with large majorities; for the acquiring and completion of construction of this section of the Hydro-Electric Railways. The municipalities have all executed agreements, authorizing the Commission to proceed with this work.

"A number of the municipalities have passed the necessary by-laws for the issue of debentures to be deposited with the Commission.

HAMILTON-GALT-ELMIRA-GUELPH ELECTRIC RAILWAY

"On January 1st, 1920, by-laws under the Hydro-Electric Railway Act, were submitted to fourteen out of seventeen municipalities in this district and, of these, thirteen municipalities carried with large majorities, while three have still to be submitted to the electors.

. . . . . .

"The Commission has been able to obtain a credit of $1,000,000 in the bank, by placing some of its bonds of the Toronto, Port Credit, St. Catharines line as collateral, and this amount it is believed will be sufficient for the present year in the purchasing of right of way, the engineering and the preparation of the right of way, for the commencement of operations when conditions warrant.

"The contemplated work for the year 1921, provided conditions remain as at present, will require an expenditure of approximately $2,500,000.00.

"It is the intention of the Commission to proceed with the work of constructing electric railways only to such extent and as rapidly as conditions as to revenues and the cost of materials and labour will warrant.

"With reference to the negotiations of the Commission with the Dominion Government: the Commission has an option on the Toronto-Eastern Railway for $706,000, for which amount the Government is prepared to accept the bonds of the Commission, for a period of fifty years, at 4½ per cent.

"The Commission has also received an offer from the Minister of Railways and Canals for the sale of the Toronto Suburban Railway, at present operating between Toronto and Guelph, and the Niagara, St. Catharines and Toronto Railway, operating in the district between St. Catharines to Niagara, St. Catharines to Welland and Port Colborne, Port Dalhousie and Niagara-on-the-Lake, for which the Minister of Railways and Canals is prepared to recommend to the Dominion Government the acceptance in payment therefor, of the Commission's bonds for a period of fifty years at 4½ per cent."

Sir Adam has also furnished the following memorandum (condensed), which gives further useful information with respect to the lines which it is proposed to acquire from the Dominion Government:—

"The Toronto Eastern Railway was designed to give a passenger and express service between Toronto and towns east thereof as far as Bowmanville, together with a freight service, working in conjunction with the Canadian Northern (now Canadian National) service.

"Owing to the physical characteristics of the district, the Grand Trunk Railway runs about two miles south of Whitby, Oshawa and Bowmanville, while the Canadian Northern is, generally speaking, about the same distance north.

"These three towns are developing industries of importance; especially is this true of Oshawa, which is now the largest shipping point between Montreal and Toronto.

"With an hourly passenger service on a line of this nature, the traffic would naturally go to the electric line on account of the frequency of service, just in the same manner as the Metropolitan Division of the Toronto and York Radial Company eliminated the passenger service on the Grand Trunk between Toronto and towns as far north as Newmarket. There would be considerable intertown traffic due to the industrial growth of Oshawa. The growth of the city eastward would be facilitated and encouraged by such a service. Unquestionably there would be a suburban business develop eastward that does not now exist, and steam lines would be largely relieved of local traffic within this zone.

"The eastern terminus of this line is the eastern boundary of the town of Bowmanville. It runs through the town along Wellington Street, a short block north of the main business street (Kingston Road.) The line from Bowmanville to Oshawa, a distance of nine miles, is almost a straight line, keeping close to the Kingston Road, as this is the principal highway along which traffic passes in the district. The line passes through Oshawa along Bond Street, again a short block north of the Kingston Road. From Oshawa to Whitby, a distance of four and one-half miles, the line keeps as close as possible to the Kingston Road, and passes through Whitby along Mary Street, a block north of the Kingston Road. From Whitby to Pickering, a distance of six miles the line is still adjacent to the Kingston Road. From this point to the Scarboro Golf Club, a distance of eight miles, the line goes south of the Kingston Road, and, at some points, is adjacent to the Grand Trunk. From this point a location was proposed westward to a junction with the Canadian Northern tracks near the Kennedy Road, and from there down the East Don to a terminal at Queen Street.

"The work completed consists of a portion from the eastern limit of the Town of Bowmanville, through Bowmanville, Oshawa and Whitby. The portion on the streets through these towns is laid with 80-lb. steel, and between towns 60-lb., with continuous angle bars. This track is all ballasted and was left in first class shape.

"From the western limit of Whitby to Pickering the line was graded but no track was done. From Pickering to the Scarboro Golf Golf Club the major portion of the right of way was acquired but nothing further was done between these points."

The Niagara, St Catharines and Toronto Railway consists of the following lines:—

Main Line, Port Dalhousie to Niagara Falls	16.74 miles.
Welland Division, Thorold to Pt. Colborne	18.53 "
Lake Shore Division, St. Catharines to Niagara-on-the-Lake	12.18 "
St. Catharines Local Lines	9.59 "
Niagara Falls Local Lines	4.63 "
	61.67 "

The line operates both a freight and passenger business, the latter consisting of a regular interurban service together with a local street railway service in the cities of St. Catharines and Niagara Falls.

The district served is a very important one industrially, as it has many large pulp and paper plants. Steel, electrical and chemical plants of magnitude are also located there. The Niagara, St. Catharines and Toronto Railway serves almost all the industries of the district—a very large proportion exclusively.

Operating Statistics.

Year.	Gross Revenue.	Operating Expenses.	Net Revenue.
1918	$940,407 21	$699,380 87	$241,026 34
1919	1,030,756 32	796,349 83	234,306 49

The Toronto Suburban Railway Company consists of the following:—

Main Line—Local City Line	10.45 miles.
Weston to Woodbridge	7.50 "
Lambton to Guelph	46.325 "
	64.275

Operating Statistics.

	Fiscal 1918.	Calendar 1918.	Calendar 1919.	Calendar Estimated 1920 conditions.
Revenue	$277,413	$314,167	$394,514	$545,000
Expenses	224,213	276,107	352,472	392,000
Net Earnings	53,200	36,060	42,042	153,000

"The estimates for 1920 conditions are based on increasing (1) service on Guelph Division from 3 to 8 round trips per day; (2) passenger rates from 2 to 2⅞ cents per mile; (3) wage schedule to pay from 46 to 50 cents per hour; (4) Increase equipment for local and through service, and to prepare for freight which is not being handled at the present time"

The broad question of policy is now up for determination. Shall this Government adopt the principle of publicly owned and operated radial railway systems for the Province as a whole —and proceed energetically, through the Hydro-Electric Power Commission, as conditions may warrant, with its construction (or acquisition) and operation of such a system?

The answer involves many considerations. In 1908, before Hydro Development started, the direct debt of the Province was $17,250,000, with an indirect liability on guaranteed bonds to the amount of approximately $8,250,000, making a total debt, direct and indirect, of between $25,000,000 and $26,000,000. To-day the direct debt of the Province amounts to $104,000,000, while its indirect debt amounts to about $21,000,000. The credit of the Province therefore stands pledged at the present time for the repayment of $125,000,000.

To date the Province has advanced approximately $56,750,000 to the Hydro-Electric Commission, and in connection with the Central Ontario System, owned by the Province. In addition to such advances it has guaranteed bonds to the amount of $8,326,000 in connection with the purchase by the Commission of the Ontario Power System and certain minor systems. This means that of the obligations of the Province now outstanding approximately $65,000,000, or 52

per cent. of its present debt, is represented by assistance given to the Hydro-Electric Commission.

The obligations of the Province are not, however, limited to the moneys and guarantees which it has already given, but, so far as can be estimated, it will in the near future have to supply between $32,000,000 and $33,000,000 more in cash to complete the Chippawa, Nipigon and other electrical power works in process of construction. $3,000,000 to $4,000,000 may also have to be advanced for the proposed auxiliary steam plant authorized at the last session of the Legislature. In 1921 bonds of the Ontario Power Company (owned by the Commission) to the amount of about $2,500,000 will fall due, and the Province will undoubtedly have to render assistance by way of cash or guarantees to meet the same. In this way the Province is practically committed to advance between $37,000,000 and $40,000,000 more to the Commission in connection with its power projects within the next year or two, and if the cost of completing the Chippawa works should exceed the present estimate of $45,000,000, the amount will have to be still further increased.

From the above it will be seen that with the completion of the Chippawa works and the construction of the proposed auxiliary steam plant, the advances already made by the Province, those which will have to be made in the near future, and the guarantees given and to be given, will amount to between $103,000,000 and $104,000,000—all in connection with the Power development, transmission and distribution system controlled and operated by the Commission. These amounts the Province and the municipalities are bound to repay.

The outcome of the Chippawa project is awaited with deep interest and much expectation by the people of Ontario, for the scheme has become so extensive and costly that the Province, providing, as it is doing, all of the moneys for its construction, is most vitally interested in its successful completion and operation. The exact effect of the Chippawa development, in so far as the cost of power developed by it and the burden to be assumed by the municipalities in connection with it are concerned, cannot be definitely determined until the works are completed, but the Government rests confident in the belief that the municipalities will continue to be able to pay, with advantage and without embarrassment to them, such prices for Hydro power as will permit repayment of the $104,000,000 before mentioned to be made over the Sinking Fund period. The necessity of raising $38,000,000 to complete the works and for other purposes of the Commission is, so far as the Province is concerned, however, a very heavy burden, particularly when the Province has to raise other large amounts of money in connection with its Highway development and other requirements.

Hydro radial projects, while they may to some degree facilitate the distribution of power as incidental to the operation of the railways, are entirely new and separate from the main object and scheme of the Commission, and with the enormous amounts involved in their construction must be considered on their merits and to a large extent independently and separately from the Hydro-Electric power project.

Radial railway projects, with high power and high speed lines, are, as far as Canada is concerned, practically a new field of enterprise. It is true that there are certain radial lines in the Province, but it would hardly be fair to judge the merits of the projected new scheme on the basis of the experience of the lines now in operation. If that were done the outlook would not be encouraging. On the other hand, there are many high speed lines in operation in the United States, constructed at much less cost than is possible at the present time, and if current report is to be accepted many of them are now meeting with difficulties in continuing their operations by reason of greatly increased costs. The experience of these lines if fully investigated would undoubtedly furnish some basis for measuring the probable revenue and costs of operation of the projected Hydro radials.

There has been a considerable amount of general discussion on the subject of radials, and municipalities which the suggested lines are proposed to serve have considered the matter and signified their wishes in respect thereto. There has, however, been practically no publicity given to the exact details of construction costs, operating expenses and expected revenue, or as to the fares or rates to be charged in the light of increased costs and other changes since the termination of the war.

Since estimates were presented for consideration of the municipalities, the Dominion of

Canada has taken over the Grand Trunk Railway and the Canadian Northern Railway, and these railroads, being now owned by the Dominion Government, their cost of operation has to be paid by the public. The effect of this situation was not before the municipalities at the time when several of the radial projects were voted upon. Neither had the present system of public highways for the Province been adopted at the time when the municipalities voted on the by-laws, and the effect of these highways when constructed upon the expected revenues of the radial roads has not been publicly investigated or discussd.

So far as the Government is concerned, no information has been put before it which is at all sufficient to permit it to form any reasonable opinion as to the correctness of the estimates put before the municipalities or the probability that the projected railways will have earnings sufficient to make them self-supporting.

Some of the estimates, however, were not made very recently, and it is beyond question that they would have to be increased if construction were proceeded with at once. This view is borne out by the report of Mr. W. S. Murray, Consulting Engineer, of New York, who was employed by the Hydro-Electric Commission to report on the present proposals, in which he gives the revised up-to-date estimated costs of the Toronto-St. Catharines Railway—with added equipment and possibly some extensions—as $22,298,635, as compared with (so far as can be figured) $16,594,749, reported to the municipalities, an increase of about 33 1-5 per cent.

With the debt of the Province now $104,000,000, and the Government under obligation to raise $37,000,000 to $40,000,000 more to complete the power development works now under construction, it is estimated by Government auditors that with its other obligations and commitments the debt of the Province will within two years amount to $160,000,000 or more. If the radial scheme is gone on with and kept strictly limited (which would be practically impossible) to the lines above mentioned the obligations of the Province will approximate $210,000,000. Should the radial scheme be extended say from London to Sarnia and Windsor and from Bowmanville to Kingston, and otherwise as municipalities from time to time request, and as is to be expected—once the scheme is fairly started, the debt would, it is estimated, be still further increased by at least $50,000,000, or to a sum more than ten times the whole debt of the Province in 1908. The Government is further advised that there is no certainty that the Province could raise the moneys necessary to finance such a scheme. But assuming that the money could be borrowed, it is pointed out that the annual interest charges would be almost equal to the total direct debt of the Province in 1908, and that the finances of the Province would be seriously crippled and great confusion and hardship created for the municipalities if the scheme were not to meet the expectations of its promoters.

The Province of Ontario must not, of course, come into competition with the Canadian National Railway System. That system showed a deficit last year of $47,000,000, and it is estimated that for some years to come deficits on railway operation by the Dominion of Canada will run from $30,000,000 to $50,000,000. These deficits must be provided by taxation, of which the Province of Ontario will pay somewhere between one-third and one-half.

Moreover, there is the general question of the national debt of Canada, and of the taxes which must be raised for Dominion purposes. The debt of Canada is now $2,000,000,000, or six times what it was in 1914. The annual expenditure of Canada before the war was between $170,000,000 and $175,000,000. The main estimates for this year total $500,000,000, not including any allowance for demobilization, and independent of Supplementary Estimates, which will increase the amount. In other words, Canada's expenditure this year will be more than one-third more than the entire national debt in 1914. This Government is satisfied that the Dominion of Canada has resources abundantly ample to take care of every obligation, but the magnitude of the debt and the vast amount that must be annually raised in Ontario to take care of its proportion of Dominion taxation, are elements in the situation that cannot be overlooked when the Province is asked to take on further burdens. The Province must be assured that the new scheme will be at least self-supporting.

It is contended by representatives of certain of the municipalities to be served by the projected roads that the covenant of the municipality relieves the Government of responsibility. If the municipalities were required to furnish the moneys for the construction of the roads this

might to a large degree be true, but the fact is that the municipalities look to the Province to supply all the money required. This being the case, it will be realized that the Government has a responsibility not only to the municipalities to be served, but to the people of the Province at large, whose credit must be pledged for every dollar that is advanced to the Commission.

Under the above circumstances, and in view of the serious results to the Province, no less than to the municipalities, which would follow if the radial scheme after adoption and the assumption of a liability of many millions of dollars were to fail to be self-supporting, the Government is clearly of the opinion that it would be doing less than its duty to the people if it were to sanction the scheme until such time as it has been fully and completely investigated in a thorough and public manner and careful consideration given to all the facts of the case.

Besides the points already discussed, the following objections to the policy involved in the proposals appear to be worthy of careful consideration.

(1) In the districts served by Hydro-Electric Power there is now a considerable shortage of power for industrial purposes. This is an especially serious matter for the Province. The completion of the Chippawa development, and the installation of an auxiliary steam plant, will no doubt relieve this situation, but the date of the completion of the Chippawa works is uncertain and the surplus of power that will then be available above industrial needs is a matter of conjecture.

(2) The present radials in Canada were practically all constructed when the cost of construction was very much lower than it is at present. It would appear from the statistics that many of these radials have failed to pay. It would seem probable that it will be much more difficult to make the proposed Hydro radials pay with their much higher cost of construction.

(3) It is said that the experience in electric railroads in the United States has been for several years financially unsatisfactory and that the municipalities would find it difficult, if not impossible, to float bonds for the projected roads, unless with the guarantee of the Government.

(4) For all medium and short distances it is alleged that a system of good roads, upon which motor trucks could carry freight, will serve the public better than electric railways because the truck is not limited to a fixed immovable track and definite stations for receiving and delivery, but can go wherever the business requires. The Province is already committed to a good roads policy involving a large expenditure.

(5) It is probable that every few years new bond issues would have to be made to pay for additional rolling stock, new sidings, double tracks and many other betterments. This would mean in the case of the present proposals additional financing on a considerable scale from time to time in the early future. The roads which it is proposed to acquire from the Dominion Government are said to be in great need of betterments at the present moment.

(6) It is fairly open to question whether to the great responsibilities now carried by the Hydro-Electric Power Commission in connection with the production and distribution of Electric power (including the Chippawa scheme) there ought now to be added the responsibilities and the great burden of detail of a province-wide system of radial railways.

The attention of the Government is also directed to certain details of the specific proposals as follows:—

(1) As regards the proposed purchase from the Dominion Government of the Toronto Suburban Railway, and the Niagara, St. Catharines and Toronto Railway, it is to be noted that the various municipalities along the route of these railways have not yet passed by-laws to guarantee their respective shares of the necessary debentures.

(2) The estimates for the projected radials in each case show a small surplus on a year's operation. The attention of the Government is however called to the fact that interest on the necessary debentures is calculated at 5 per cent. It is clear that such debentures will have to bear an interest rate of at least 6 per cent. This increase in the interest rate alone turns every estimated surplus, except one, into a deficit. In the one exception the estimated surplus is reduced to $11,038.

(3) It is proposed to issue the debentures for the cost of construction for 50 years. There is no allowance in the estimates for depreciation, renewals or sinking fund, except in the case of the Toronto, Port Credit and London Railway, where $137,342 is allowed for sinking fund. The rolling stock, electric equipment and tracks would have to be renewed at least once within the fifty years, and some parts perhaps twice. Making the proper allowance for sinking fund and depreciation will also turn the small estimated surpluses into large deficits. In any event it is not good financing to make no allowance for sinking fund renewals or depreciation.

(4) It is said that the estimated operating expenses are calculated on a low basis. The percentage of the operating expenses to earnings per mile of all the other radials in Ontario, including the London and Port Stanley railway, is however, considerably greater than the estimated operating expenses of the proposed lines.

(5) The estimated earnings of two of the proposed radials, taken on a mileage basis, are also greatly in excess of those of any existing radial in Ontario, including the London and Port Stanley Railway.

(6) The estimates given for all the proposed radials are in bulk, that is to say, a lump sum is given in each case as the cost of construction, a lump sum as the annual cost of operation, and a lump sum as the annual earnings. It would be most desirable to have all these estimates in detail. Many questions arise which cannot be determined when the estimates are given in bulk. For instance: How many employees is it estimated will be required, and what is the rate of wage in each classification proposed to be paid them? Also what rates for passengers and freight are proposed to be charged? Under "The Ontario Railway Act." two cents per mile is the maximum passenger rate, but it would appear that the estimated earnings for the proposed radials are based on a higher rate than this.

(7) With reference to the railways which it is proposed to purchase from the Government, it would not appear to be wise to complete such purchase without first having had a thorough examination and valuation by some independent person or body.

Some of the foregoing arguments may not be valid and none of them may be conclusive against the ultimate adoption of the proposals. They are, however, as it appears to the Government, conclusive against their adoption at the present time and until the whole subject has been fully and exhaustively examined, because, if and when the Government goes ahead, the Province will be committed not only to the present proposals, but to a Province-wide publicly owned radial electric scheme operated by the Hydro-Electric Power Commission, involving an ultimate mortgage of the Province and of the municipalities interested of scores of millions of dollars. The matter is of far too great importance to be dealt with hastily or lightly. The Government has, therefore, decided to appoint a Commission to go into the whole problem from every point of view and present a report for its information and guidance.

The Commission will be requested to proceed immediately with its task, to hold public inquiries, and to report without unnecessary delay. In the meantime all action in the direction of further outlays or the assumption of further responsibitities in radial matters by the Electric Commission will be stayed.

APPENDIX 2

(Signed) "R.F.S."
(Signed) "A.F.M."
(Signed) "W.A.A."
(Signed.. "C.H.M."

OUTLINE OF COURSE OF COMMISSION

The first Order-in-Council appointing the Commission was dated July 16th, 1920. By it T. A. Russell was appointed a Commissioner. A meeting of Commissioners was arranged for 19th July, 1920, and three commissioners met on that date, the resignation of Mr. Russell not having been obtained in time to call off the meeting, and Mr. McCallum, one of the

Commissioners, not being reached in an attempt to prevent his coming. The Chairman and Commissioners Amos and Bancroft met for a preliminary discussion.

The final Order-in-Council appointing this Commission and replacing Mr. Russell by Brig.-General Mitchell, is dated July 21st, 1920, and the first meeting of all the Commissioners was held on July 22nd. Meetings more or less informal were held by the Board on the 26th and 27th. The first public meeting was held on July 28th, 1920.

At a previous meeting, and after consultation with Mr. Hellmuth, the counsel who had been retained by the Commission, it was decided that the proper course was to prepare and serve requisitions on the Hydro Electric Railway Commission and the Municipal Hydro Electric Radial Railways Association. These were prepared and on the 28th July, copies filed and delivered. It was, as the Commissioners understood, on all hands agreed, that the material asked to be supplied by such requisitions was such as was absolutely necessary to be obtained before the oral evidence could be taken and proceeded with.

Within a day or two the question was raised by the Hydro Electric Power Commission of Ontario as to whether the estimates required to be delivered pursuant to the requisitions, should be brought up to date or not. It had been considered by all parties that the requisitions could be supplied within a couple of weeks if not brought up to date, and within a couple of weeks further time if so brought up. Intimation by letter was given to counsel for the Hydro Electric Power Commission, that commissioners would be content to have supplied at first the material and estimates then in the possession of the Hydro. It was thus expected that by the end of July the productions would be in.

The adjournment made on July 28th, was in consequence expected to last for about a month.

During August and the first days in September, members of the Commission had utilized the adjournment by making a tour of the territory in Ontario, through which the proposed system would run. Some of the productions came in during September, but all had not been received by the 28th, when a further meeting was held. It was then decided better, even though the requisitions had not fully been completed, to commence taking evidence and Mr. F. A. Gaby was called. The requisitions were not substantially complied with until sometime in the early part of October.

Mr. Gaby was examined on the 29th and 30th of September.

Some little difficulty then arose about the productions being still incomplete, and it being found difficult to continue the examination of Mr. Gaby without them, it was agreed to adjourn until October 14th, when it was expected the material would be completed. On that day the examination of Mr. Gaby was continued, and on the next day, when the Commission adjourned until Tuesday, October 19th. The Commission sat on that day and on the 20th, 21st, 22nd, 25th and 26th, when Mr. Gaby's evidence was concluded.

A request was then made to counsel representing the Hydro-Electric Power Commission, the Municipal Hydro Electric Railway Association, and those questioning the propriety of the proposed purchase to know if they desired at this point to adduce further evidence. Neither offered to do so.

At the conclusion, the following discussion occurred, as appears by the record:

"THE CHAIRMAN: Are the representatives of the Hydro desirous now of calling any further evidence supplementary to the evidence that has been given by Mr. Gaby.?" Of course he comes here at the request of this commission that is sitting investigating the matter. We have made requisitions for certain material to be supplied, and it is at our request Mr. Gaby was called for the purpose of explaining and giving evidence to elucidate and clear up these statements and productions that have been put in. What is the attitude of the Hydro people upon that? Do they desire to supplement Mr. Gaby's evidence now with any further evidence at this time?"

"*Mr. Macinnes*: My suggestion is, if the Commission will agree with it, that Mr. Gaby was brought here, as you have just stated, not by the Hydro Commission but by this Royal Commission. Certain information has been obtained from him, and on his examination certain points by way of criticism were raised. I understand that it is contemplated by my friend, Mr. Robertson, that other critical evidence will be brought by him before this Commission.

It would therefore seem obvious, I think, that it would be better that all criticism should be dealt with at the one time, and therefore that when there has been brought before this Commission any elaboration there may be on any points that Mr. Robertson has called attention to, the Commission should then deal with those, with any such evidence as they feel will be of assistance and will satisfy the Commission as to any difficulties that may be raised."
and at p. 1240 the following:

"*The Chairman*: Nobody is ready to offer us any further technical evidence at the present time?

"*Mr. Robertson*: I am not, at the present time; I would not attempt to bring it at this stage."

The position of the Commissioners was that of men appointed to conduct an inquiry. We hoped and expected that the Hydro Electric Power Commission would put in all the evidence, documentary and oral which they had in their possession in support of the scheme. Instead of that, they rather took the position of a defendant awaiting attack. Mr. Robertson's position representing those criticising the scheme, was that at this point the experts whom he was retaining could not, until they had had an opportunity to examine the scheme fully, be called upon to testify.

The result was the Commission had to map out and follow its own course. It was thought appropriate that the evidence of Mr. Gaby should be supplemented by that of Mr. Murray, an engineering expert who had reported to the Hydro Electric Power Commission on the whole scheme on May 28th, 1920. It was arranged that his attendance should be obtained, if possible, by Mr. McKay or Mr. McInnes, and an adjournment was made to fix a date when he could be present. His convenience had to some extent to be consulted and though he was expected to attend earlier, he, in fact, did not come until the 22nd day of November. Meantime the Commissioners had spent part of the intervening time in visiting certain cities in the United States where electric railways and systems were in operation, and could be examined and information obtained on the spot. The judicial appointments of the Chairman and convenience of counsel and Commissioners had, from time to time, to be consulted to some extent.

The next sitting of the Commission was held on November 22nd, when Mr. W. S. Murray was called.

About this time a suggestion was made by the members of the Commission to counsel about the propriety of endeavoring to agree upon three or four expert operating electric railway men, who might be asked to make a thorough investigation of the proposed system, and give evidence. It was suggested that much time and expense might thus be avoided. To this proposition, counsel for the Hydro Power Commission and the Municipal Hydro Electric Radial Railways Association were unwilling to accede.

It was considered indispensably necessary that officials from all the railways, steam and electric, operating in those portions of the Province through which the railways in question would run, should be called for the purpose of learning to what extent the public was being served by them; their annual revenues and expenditures and the like, and the nature of their business. Accordingly the following witnesses were called and examined:

C. E. Friend, Comptroller Canadian National Railways, New York Central.

G. C. Royce, Manager, Toronto Suburban Railway.

E. P. Coleman, General Manager, Dominion Power and Transmission Lines.
from the 23rd to 25th November. and

W. M. Neal, Assistant General Superintendent of Ontario, Western Section C.P.R., on December 1st.

C. Bowker, General Superintendent Eastern Lines (Ontario) of G.T.R. System.

W. M. Kirkwood, General Manager of the Grand River Railway and Lake Erie and Northern, both electric railways, subsidiaries of the C.P.R., and

George L. Martin, General Manager of the Toronto, Hamilton and Buffalo Railway.
on December 1st, 2nd and 3rd.

The Commissioners also decided that they must retain experienced engineers and operating men, and ask them to make an independent investigation of the scheme. Accordingly Mr. F. P. Gutelius, Vice-President and General-Manager of the Delaware and Hudson Railway

was chosen. He had had great experience on steam lines in Canada and latterly on steam lines and subsidiary electric lines in the United States. Mr. Tye, a steam railway engineer of wide experience, who had previously made a report on a proposed new electric railway in a part of the territory in question, was also retained.

Mr. W. A. McLean, Deputy Minister of Highways was called on November 25th, and gave evidence as to the Government plans and expenditures in connection with their improved highways policy.

Mr. Tye was called on 29th and 30th of November.

The Commission adjourned on December 3rd to December 10th, when Mr. Gutelius having finished his examination of the documents and facts deemed by him advisable and necessary, and after making a personal inspection of the lines and territory in company with officials of the Hydro Electric Power Commission and a trip over the London and Port Stanley Railway with and at the request of Sir Adam Beck, was called. He continued his testimony on the 11th and 13th.

When in Cleveland, the Commissioners were recommended to call as a witness, F. W. Coen, Vice-President and General Manager of the Lakeshore Electric Railway and its subsidiary companies as an experienced operating man, to give evidence with respect to the operations of electric railways in and around Cleveland, said to be a city where experiments in and information gained in the operation of electric railways had been as extensive as in almost any part of the United States. He was called and testified on December 14th.

It seemed then appropriate and necessary that the officials of the Hydro who had been entrusted by Mr. Gaby, to a large extent with the preparation of the estimates which had been put in before the Commission, should be called, so as to obtain the benefit of their evidence with reference thereto. We were told that no one of these officials of the Hydro could, owing to their other engagements, and particularly with reference to the pending consideration of and work in connection with the so-called Toronto Hydro Clean-up, be spared to attend for some time. We thought there should be little difficulty in calling one of the officials at a time, but in the end consented to an adjournment until the beginning of January. It was not, however, until January 10th that Mr. Hewson was available. He had prepared the estimates for the electrical equipment, but was assigned the duty, as well, of making more for operating costs and revenues. His examination continued during the 11th, 12th, 13th and 14th, when an adjournment was made, and he was requested to endeavor to find certain tabulated and classified statements referred to in a published report of the Hydro Electric Power Commission. He returned to the stand on January 24th, and continued to testify during the 25th and 26th. At the conclusion of Mr. Hewson's evidence, it was requested and arranged that counsel for the Hydro Electric Power Commission and the Municipal Hydro Electric Radial Railways Association should prepare a freight brief and hand it in later.

W. R. Robertson, General Superintendent of Hydro Railways was examined on January 27th and 28th, and F. W. Fairlie, Railway Engineer for the Hydro Electric on January 31st.

Mr. R. S. Robertson had been notified to get his witnesses ready by that date, and began calling them.

Witnesses in connection with motor truck transportation were first called, and local witnesses such as mayors, reeves, councillors, etc., during February 1st, 2nd, 3rd, and 4th, also C. A. Matthews, Deputy Treasurer, of the Province of Ontario, with reference to its debt and the advances and commitments with respect to the Hydro.

An adjournment was made from February 4th to February 21st, during which the Chairman had judicial engagements which he was unable to avoid. Counsel engaged before the Commission had also got in difficulty over postponed cases.

On the 21st, Mr. Robertson continued with his witnesses, and on the 22nd, 23rd, 24th and 25th. Mr. Robertson having completed the testimony of his general witnesses desired an adjournment from February 25th to March 1st, to arrange to bring on his experts.

On March 1st, Dr. L. A. Herdt was called.

On March 3rd, 4th, 5th, R. M. Feustel.

On March 7th and 9th, C. E. Bailey.

On that day Mr. Robertson completed his evidence, having called in all, forty-six witnesses.

On March 9th, an adjournment was made under protest to March 28th, at the request of the Hydro Electric Power Commission's Counsel. On the latter date, counsel for that Commission and the Municipal Hydro-Electric Radial Railways Association began calling their witnesses, and continued on the 29th, 30th, 31st., April 1st, 4th, 5th, 6th, 7th, 8th, 11th, 12th, 13th, 14th, 15th, 18th, and 19th. On the latter date a further adjournment was made to April 25th, at the request of Hydro counsel.

On April 25th, Charles E. Lee was called. He was followed by Bion J. Arnold a consulting engineer of New York, and continued to testify on the 26th, 27th, 28th and 29th, when an adjournment was had until May 4th, at the request of the Hydro counsel to enable Mr. Arnold to go to New York to attend an important engagement.

On May 4th, 5th and 6th, Fred A. Sagar, an assistant of Mr. Arnold was called.

On May 9th, Mr. Arnold returned and continued his evidence on the 10th, 11th, 12th, 13th and again on the 16th and 17th. Mr. Sagar continued his testimony on the 17th, 18th, 19th, 20th, 26th, 27th, 30th, 31st and June 1st. On the latter date Charles L. Wilson, Assistant Manager of the Toronto and York Radial railway was called.

Certain officials of the Hydro, namely: Oswald Stanley, E. K. Bunnell, F. W. Fairlie (recalled), W. R. Robertson (recalled), and T. A. Wilkinson were examined on the remainder of that day and the 2nd of June, when an adjournment by consent of all parties was made to June 6th, when the Hydro completed its evidence.

Adjournment was then made until the 13th of June, to suit the convenience of Mr. Hellmuth and of Mr. Rifenberick, a witness retained by the Commission.

On June 13th the Commission again began calling witnesses. The Hon. Dr. Reid, Minister of Railways, was called and also Mr. Rifenberick on that day, and on the 14th.

On the 15th and 16th, Robert I. Todd of Indianapolis was called.

On the 17th, Henry H. Couzens, Manager of the Toronto Civic Transportation Commission and Charles A. Matthews (recalled). On the 20th and 21st, the evidence of Mr. Rifenberick was continued.

On the 22nd, J. H. Gundy, a broker and bond dealer was called, also E. L. Couzens, Manager of the Toronto Harbour Commission. F. A. Sagar was then recalled shortly by the Hydro.

The last witness called by the Commission was F. P. Gutelius, and the evidence was closed on June 22nd. An adjournment was made from that date to June 27th, to enable counsel to prepare their argument. It took place as follows.

Mr. R. S. Robertson, June 27th and part of the 28th.

Mr. McKay, K.C., and Mr. C. C. Robinson, part of June 28th, 29th, and 30th.

Mr. Hellmuth, part of July 1st and July 2nd.

APPENDIX 3.

(Signed) "R.F.S."
(Signed) "A.F.M."
(Signed) "W.A.A."
(Signed) "C.H.M."

Statement showing various estimates of cost of acquiring and constructing the proposed Hydro Electric Radials. Price, Waterhouse & Co., Royal Bank Building, Toronto, Ont., Canada.

ESTIMATED COST OF ACQUIRING AND CONSTRUCTING THE PROPOSED HYDRO ELECTRIC RAILWAYS, AS SET FORTH

(a) ESTIMATES PREPARED BY THE HYDRO ELECTRIC POWER COMMISSION
(b) IN STATEMENT PREPARED FROM SUCH ESTIMATES OR
(c) FROM DATA PREPARED FOR THE HYDRO POWER COMMISSION BY BION J. ARNOLD.

Particulars	Hydro Electric Power Commission Original Estimate of Construction Costs	Construction Costs as submitted to Municipalities for voting	Construction Costs as submitted to the Ontario Government per Government Statement dated July 6th, 1920	Construction Costs as prepared and submitted to the Hydro Radial Commision by the Hydro Electric Power Commission	Construction Costs as prepared by Bion J. Arnold for the Hydro Electric Power Commission	Construction Costs as prepared by Bion J. Arnold for the Hydro Electric Power Commission per his supplemental Report
Toronto, Port Credit, St. Catharines Line	1. $21,648,635.00	2. $16,249,394.00	$22,298,635.00	(7) 3. $20,603,953.30	4. $19,580,000.00	5. $17,850,000.00
Toronto Eastern Line	2. 6,510,794.00	1. 8,360,794.00	8,360,794.00	3. 9,164,132.35	4. 9,794,000.00	5. 8,189,000.00
Hamilton, Guelph, Elmira Line	2. 4,755,659.00	1. 6,530,659.00	6,530,659.00	3. 7,192,895.00	4. 6,002,500.00	5. 6,002,500.00
Toronto Suburban Line	6.	6.	6.	3. 3,591,774.00	5. 4,222,000.00	5. 3,752,000.00
Niagara Central Line	6.	6.	6,170,374.00	3. 5,091,330.00	5. 4,960,000.00	5. 4,960,000 00
	$32,915,088.00	$31,140,847.00	$43,360,462.00	$45,644,084.65	$44,558 500.00	$40,753,500.00

NOTES

1. Items marked 1. (Exhibit 62, 44 and 57) include barns, equipment, etc.
2. Items marked 2. (Exhibit 61, 63 and 49) do not include barns, equipment, etc.
3. Items marked 3. represent estimated cost, including equipment to 1924—1925 or 1926.
4. Items marked 4. represent estimated cost, including equipment to 1924—1925 or 1926, after adding proportion of estimated cost of Toronto Terminal and deducting from construction costs 15% to reduce costs to what was considered by Mr. Arnold as the approximate current costs.
5. Items marked 5. represent estimated cost, including equipment to 1924—1925 or 1926 after deducting 15% from estimated costs to reduce figures to what was considered by Mr. Arnold as the approximate current costs; but nothing is included for estimated cost of Toronto Terminal.
6. Items marked 6. represent figures not prepared or not available.
7. Items marked 7. represent figures shown thereunder as per statement prepared by Price, Waterhouse & Co., from data supplied by the Hydro Electric Power Commission.

APPENDIX 4.

(Signed) "R.F.S."
(Signed) "A.F.M."
(Signed) "W.A.A."
(Signed) "C.H.M."

(a) Statement Comparing the Proposed Hydro Electric Radials as a Whole with Certain Lines in the United States.

(b) Operating Statement of Each Line Comprising the Proposed System Together with Certain Explanatory Notes

JULY 26TH, 1921

Price, Waterhouse & Co., Royal Bank Bldg., Toronto, Ont., Canada.

Royal Bank Building,
Toronto, July 25th, 1921.

Honourable Justice R. F. Sutherland, Radial Railway Commission, Toronto, Ontario.
Dear Sir:—

We have now prepared and submit herewith a revised "Statement comparing estimated Revenue and Expenses of the proposed Hydro Electric Radial lines with certain lines in the United States," and we are also submitting revised operating statements of the several lines included in the proposed Hydro Electric Railway system. These statements supersede and are to replace those sent you on the 4th of December and 16th of May last.

The statements submitted herewith are drawn up along the same general lines as the former statements; the present ones however, will be found more complete as a result of our embodying therein certain data which we have now received from the Hydro Electric Power Commission and from the Washington, Baltimore and Annapolis Electric Railroad Company. It will be noted that we have entirely omitted the figures relating to the Detroit United Railways, as we were unable to secure the necessary detailed information from the Hydro Electric Power Commission. It will also be observed that we do not show a division of the fixed charges in the case of the Union Traction Company of Indiana, as the necessary figures were not available. On the other hand, certain statistical data, such as percentage of earnings and expenses, etc., have been added.

Certain changes have also been made in the operating statements of the several proposed Hydro lines relating to mileage figures. We could not, however, complete the statements in respect of the population statistics, as the Hydro Electric Power Commission did not have the required information in such shape as to be useful to us.

With regard to the statement referred to by us in our letter of the 21st January, 1921, under Section No. 8, we are advised by the Hydro Electric Power Commission as follows:

> "We have not attempted to work out the distribution of the guarantee between the various municipalities to correspond to the estimated costs as submitted to the Radial Railway Commission. This is work that requires the most careful consideration and at the present time we will be unable to have it undertaken."

The figures used by us in preparing the attached statements have been extracted from exhibits on file with the Radial Railway Commission or were supplied us by the Hydro Electric Power Commission and the Washington, Baltimore and Annapolis Electric Railroad Company. Whilst the figures are in the main self-explanatory, there are certain features to which we beg to draw your attention:

(1) The figures relating to the proposed Hydro Electric Radials are, of course, mere estimates.

(2) The estimated operating figures of the Hydro Electric Radials are for the year 1925, whilst those of the lines with which they are compared are for the year 1919.

(3) Mileage or track conditions are different in each case, e.g., the Lake Shore Electric Railway of Ohio is, we understand, entirely a single track road, whilst each of the other lines have more or less double track.

(4) The Revenue and Expenses of the Northern Ohio Traction and Light Company are largely augmented by auxiliary operations. We were able to ascertain the income from "Auxiliary" operations, but were unable to separate the expenses.

(5) We have no means of telling whether the operating expenses have been uniformly classified; nor have we any knowledge of the basis upon which depreciation has been calculated and charged.

(6) The comparison of the Fixed Charges is of little or no value. The proposed Hydro Electric Radials are to be entirely financed by Bond Issues, with a consequent fixed heavy interest charge. In the case of the other lines used in the Comparative Statement, it would appear that the financing has been chiefly by the sale of Capital Stock, with the result that the interest charges are out of all proportion to that of the proposed Hydro Radial lines.

(7) We were unable to ascertain the reason why the Union Traction Company of Indiana made such a poor net showing in 1919. It is possible that an explanation might convey an entirely different view of the Company's operations.

We shall be glad to give you any additional explanations of the attached statements or assist you in any way we can.

Yours very truly,

(Signed) Price, Waterhouse & Co.

STATEMENT COMPARING ESTIMATED REVENUE AND EXPENSES OF THE PROPOSED HYDRO ELECTRIC RADIAL LINES WITH CERTAIN LINES IN THE UNITED STATES

Particulars	Proposed Hydro Electric Radials (All Lines) Year 1925		Washington, Baltimore and Annapolis Year 1919		Lake Shore Electric Railway of Ohio Year 1919		Union Traction System of Indiana Year 1919		Northern Ohio Traction and Light Co.—Year 1919	
Miles of Track	421.291		106.16		151.49		452.95		242.20	
Miles of Route	327.797		61.92		151.49		427.20		172.70	
REVENUE	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Passenger	$4,937,624.00	61.1	1,967,672.79	90.7	1,515,644.78	73.3	3,037,990.61	80.3	5,722,406.34	61.9
Freight	2,877,557.00	35.6	167,957.57	7.7	388,839.02	18.8	511,162.59	13.5	347,296.79	3.8
Miscellaneous and Auxiliary Operations	268,760.00	3.3	32,489.39	1.6	162,740.76	7.9	232,400.42	6.2	3,158,136.46	34.3
Total Revenue	$8,083,941.00	100.	2,168,119.75	100.	2,067,224.56	100.	3,781,553.62	100.	9,227,839.59	100.
Passenger Revenue per mile of track	$ 11,705.00		18,535.00		10,000.00		6,707.00		23,646.00	
Freight Revenue per mile of track	6,833.00		1,582.00		2,566.00		1,129.00		1,435.00	
Other Revenue per mile of track	638.00		306.00		1,075.00		513.00		13,035.00	
Total Revenue per mile of track	$ 19,176.00		20,423.00		13,641.00		8,349.00		38,116.00	
Passenger Revenue per mile of route	$ 15,064.00		31,777.00		10,000.00		7,111.00		33,135.00	
Freight Revenue per mile of route	8,779.00		2,712.00		2,566.00		1,197.00		2,011.00	
Other Revenue per mile of route	820.00		526.00		1,075.00		544.00		18,287.00	
Total Revenue per mile of route	24,663.00		35,015.00		13,641.00		8,852.00		53,433.00	
EXPENSES:										
Operating Expenses (including depreciation)										
Maintenance—Way and Structures	$ 742,017.00	16.5	317,538.37	21.0	226,580.44	16.3	489,005.77	18.1	833,502.43	12.8
Maintenance—Equipment	772,277.00	17.3	281,205.82	18.6	152,623.84	10.9	312,107.36	11.6	688,326.56	10.9
Power and Expense	604,219.00	13.5	133,855.73	8.9	346,544.11	24.9	777,253.53	28.9	1,619,882.96	25.0
Conducting Transportation	1,481,633.00	32.9	513,899.90	33.9	464,010.84	33.3	722,246.89	26.8	1,974,550.51	30.4
General Expenses	891,196.00	19.8	266,578.27	17.6	203,393.24	14.6	395,254.52	14.6	1,362,252.55	20.9
Total Operating Expenses	$4,491,342.00	100.	1,513,078.09	100.	1,393,152.47	100.	2,695,868.07	100.	6,478,515.01	100.
Ratio of Operating Expenses to Revenue		55.7		69.8		67.4		71.2		70.2
Operating Expenses, per mile of track	$ 10,660.00				9,196.00		5,951.00		26,770.00	
Operating Expenses, per mile of route	$ 13,702.00				9,196.00		6,311.00		37,513.00	
Fixed Charges (Exclusive of depreciation):										
Taxes	$ 133,336.00		128,344.89		96,891.70		1,085,168.58		499,610.00	
Interest	2,651,561.00		295,202.43		339,801.04				893,825.51	
Total Fixed Charges	$2,784,897.00		423,547.32		436,692.74		1,085,168.58		1,393,435.51	
Ratio of Fixed Charges to Revenue		34.4		19.5		21.1		28.66		15.1
GRAND TOTAL—ALL EXPENSES	$7,276,239.00		1,936,625.41		1,829,845.21		3,781,036.65		7,871,950.52	
NET SURPLUS OR REVENUE	$ 807,702.00		231,494.34		237,379.35		516.97		1,355,889.07	
Ratio of Net Surplus to Revenue		9.9		10.7		11.5		.14		14.7
		100.		100.		100.		100.		100.
Net Surplus, per mile of track	$ 1,917.00		2,180.00		1,566.00		1.15		5,603.00	
Net Surplus, per mile of route	2,464.00		3,739.00		1,566.00		1.21		7,851.00	
ESTIMATED COST OR BOOK VALUE OF										
Ways, Structures, Equipment, etc.	$45,644,084.35		10,843,283.13		14,161,653.06		23,384,002.19		33,635,935.05	
Ways, Structures, Equipment, etc. per mile of track	$ 108,343.00		102,140.00		93,840.00		51,620.00		139,075.00	
Ways, Structures, Equipment, etc., per mile of route	$ 139,248.00		175,116.00		93,840.00		54,738.00		194,765.00	

TORONTO, PORT CREDIT, ST. CATHARINES LINE

SUMMARY OF REVENUE AND EXPENSES

PREPARED FROM ESTIMATES SUPPLIED HYDRO-ELECTRIC RADIAL COMMISSION BY THE HYDRO-ELECTRIC POWER COMMISSION.

	1925	1930	1935
Miles of Route	72.77	72.77	72.77
Population Served, Exhibit 52, p. 12	170.407	211.195	260.105
REVENUE:			
Passengers	$1,694,676 00	$2,034,130 00	$2,457,220 00
Freight	1,408,250 00	1,705,337 00	2,023,725 00
Miscellaneous	50,000 00	60,000 00	70,000 00
Total Revenue, Exhibit 51, p. 7	$3,152,926 00	$3,799,467 00	$4,550,945 00
Passenger Revenue, per mile, Route	$ 23,300 00	$ 27,964 00	$ 33,780 00
Freight Revenue, per mile, Route	19,360 00	23,445 00	27,820 00
Miscellaneous Revenue, per mile, Route	687 00	825 00	960 00
Total Revenue, per mile of Route	$ 43,347 00	52,234 00	62,560 00
PASSENGER REVENUE, PER CAPITA	$ 9 95	$ 9 65	$ 9 45
EXPENSES:			
Operating Expenses:			
Maintenance-Way and Structures	$ 103,000 00	$ 154,500 00	$ 185,400 00
Maintenance-Equipment	124,583 00	219,496 00	285,755 00
Power Expense	229,455 00	259,116 00	315,326 00
Conducting Transportation	486,310 00	529,718 00	609,887 00
General Expenses	357,168 00	410,778 00	471,299 00
Depreciation	214,389 00	234,654 00	268,173 00
Total Operating Expenses, Exhibit No. 51, page 6	$1,514,905 00	$1,808,262 00	$2,135,840 00
Operating Ratio	48%	47.6%	47%
Operating Charge per mile of Route	$ 20,826 00	$ 24,858 00	$ 29,362 00
Fixed Charges:			
Taxes	$ 71,336 00	$ 71,336 00	$ 71,336 00
Interest	1,236,237 00	1,279,833 00	1,355,559 00
Sinking Fund	.....	.....	206,040 00
Total Fixed Charges, Exhibit No. 51, page 6	$1,307,573 00	$1,351,169 00	$1,632,935 00
GRAND TOTAL—All EXPENSES:	$2,822,478 00	$3,159,431 00	$3,768,775 00
NET SURPLUS	$ 330,448 00	$ 640,036 00	$ 782,170 00
NET SURPLUS, per Mile of Route	$ 4,543 00	$ 8,800 00	$ 10,753 00

NOTE:—Population figures do not include the population of Toronto.

TORONTO, PORT CREDIT, ST. CATHARINES LINE

NOTES RE REVENUE AND EXPENSES.

RATES

Passenger—Standard rate, 2.875c per mile.
Interurban averages, 2¼-2½c per mile.
Suburban averages, 1½c per mile.

Freight—Standard rate in effect on Steam Railways as of 30th May, 1920, which has been increased by 40% in August, 1920. Full details as to how total was made are not available.

Interest—6%

Sinking Fund—1% starting 1935. Based on Capital outlay, $20,604.00.

Depreciation—Various rates. Consideration being given different classes of assets.

Taxes—Various rates. No provision made for increase of rate or assessment in respect of future periods.

Car Rental—Standard rates. Amount included in General Expenses.

Power—Estimated used, 1st year ..... 6,500 — 7,000 H.P.
5th year ..... 7,500 — 8,000 H.P.
10th year ..... 8,000 — 9,000 H.P.

Cost—1925, 1930, 1935:

At Toronto	$18.00 per H.P.
At New Toronto	25.00 " "
At Port Credit	20.00 " "
At Bronte	21.00 " "
At Hamilton	15.50 " "
At Grimsby	26.00 " "
At St. Catharines	20.00 " "

TORONTO EASTERN LINE

SUMMARY OF REVENUE AND EXPENSES
PREPARED FROM ESTIMATES SUPPLIED HYDRO-ELECTRIC RADIAL COMMISSION BY THE HYDRO-ELECTRIC POWER COMMISSION

	1924	1929	1934
Miles of Route	43.83	45.42	45.42
Population Served, Exhibit No. 47	95.643	126.486	156.285
REVENUE:			
Passengers	$ 940,000 00	$1,255,000 00	$1,585,000 00
Freight	225,000 00	278,000 00	330,000 00
Miscellaneous	25,000 00	30,000 00	35,000 00
Total Revenue, Exhibit No. 34, p. 9	$1,190,000 00	$1,563,000 00	$1,950,000 00
Passenger Revenue, per mile of route	$ 21,447 00	$ 27,631 00	$ 34,897 00
Freight	5,110 00	6,120 00	7,265 00
Miscellaneous	570 00	660 00	770 00
Total Revenue per mile of route	$ 27,127 00	$ 34,411 00	$ 42,932 00
Passenger Revenue, per capita:			
Suburban	$ 7 85	$ 7 90	$ 8 10
Interurban	14 00	14 00	14 00
All passengers	9 85	9 95	10 15

EXPENSES:			
Operating Expenses:			
Maintenance	$ 55,000 00	$ 93,500 00	$ 99,000 00
Maintenance Equipment	43,700 00	107,854 00	142,901 00
Power Expense	99,700 00	134,750 00	154,800 00
Conducting Transportation	194,469 00	235,980 00	257,310 00
General Expense	113,900 00	133,200 00	152,700 00
Depreciation	82,642 00	111,640 00	120,243 00
Total Operating Expenses, Exhibit No. 34, page 6	$ 589,411 00	$ 816,924 00	$ 926,954 00
Operating Ratio	49.5%	52.3%	47.5%
Operating Charges per mile of route	$ 13,427 00	$ 17,986 00	$ 20,408 00
Fixed Charges:			
Taxes	$ 31,000 00	$ 34,000 00	$ 37,500 00
Interest	549,851 00	605,862 00	660,084 00
Sinking Fund	.....	.....	110,014 00
Total Fixed Charges, Exhibit No. 34, page 9	$ 580,851 00	$ 639,862 00	$ 807,598 00
GRAND TOTAL—ALL EXPENSES	$1,170,262 00	$1,456,786 00	$1,734,552 00
NET SURPLUS	$ 19,738 00	$ 106,214 00	$ 215,448 00
NET SURPLUS PER MILE OF ROUTE	$ 450 00	$ 2,339 00	$ 4,744 00

TORONTO EASTERN LINE

NOTES RE REVENUE AND EXPENSES.

RATES

Passenger—Standard 2.875c per mile.
Urban, 4c, 5c and 6c per ride.
Interurban, based on estimated revenue of:
$14.00 per capita—Population 1924, 31,208; 1929, 42,032; 1934, 54.300.
See Exhibit No. 47 for full particulars.

Freight—Standard rate as in effect on Steam Railways, 30 May, 1920, which has been increased by 40% in August, 1920. Full details of freight revenue are not available.

Interest—6%

Sinking Fund 1% starting 1935. Based on Capital outlay of $11,001,400.00.

Depreciation—Various rates. Consideration being given to different classes of assets.

Taxes—Various rates. Some provision made for future increase; no details available.

Car Rental—Standard rates. Amount included in General Expenses.

Power—Estimated used: 1st year ..... 3,500 — 4,000 H.P
5th year ..... 4,000 — 4,500 H.P.
10th year ..... 4,500 — 5,000 H.P.

Cost—1925, 1930, 1935:

At Toronto ..... $20.00 per H.P.
At Pickering ..... 26.00 " "
At Oshawa ..... 30.00 " "

HAMILTON, GUELPH, ELMIRA LINE
SUMMARY OF REVENUE AND EXPENSES
PREPARED FROM ESTIMATES SUPPLIED HYDRO ELECTRIC RADIAL COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION

	1925	1930	1935
Miles of route	82.847	82.847	82.847
Population Served, Exhibit No. 56	97.424	116.176	139.072
REVENUE:			
Passenger Revenue per Capita:			
Passengers	$ 831,447 00	$ 992,039 00	$1,186,412 00
Freight	453,580 00	543,496 00	651,395 00
Miscellaneous	37,000 00	42,000 00	47,000 00
Total Revenue, Exhibit No. 55, p. 7	$1,322,027 00	$1,577,535 00	$1,884,807 00
Passenger Revenue per mile of route	$ 10,036 00	$ 11,974 00	$ 14,320 00
Freight Revenue per mile of route	5,475 00	6,560 00	7,863 00
Miscellaneous Revenue per mile of route	446 00	507 00	567 00
Total Revenue per mile of route	$ 15,957 00	$ 19,041 00	$ 22,750 00
Passenger Revenue Per Capita:			
Urban	$ 8 60	$ 8 60	$ 8 60
Interurban	7 85	7 85	7 37
All passengers	8 53	8 54	8 53
EXPENSES:			
Operating Expenses:			
Maintenance, way and structures	$ 121,200 00	$ 139,800 00	$ 150,900 00
Maintenance equipment	48,795 00	91,512 00	106,257 00
Power Expense	87,209 00	102,276 00	116,803 00
Conducting Transportation	239,649 00	270,314 00	302,328 00
General Expenses	186,615 00	222,020 00	250,193 00
Depreciation	125,577 00	125,543 00	134,628 00
Total Operating Charges, Exhibit No. 55, Pages 6 and 9	$ 809,045 00	$ 951,465 00	$1,061,109 00
Operating Ratio	61.2%	60.3%	56.4%
Operating Charge per mile of route	$ 9,777 00	$ 11,485 00	$ 12,808 00
Fixed Charges:			
Taxes	$ 10,000 00	$ 10,000 00	$ 10,000 00
Interest	431,573 00	443,994 00	539,679 00
Sinking Fund	.....	.....	71,929 00
Total Fixed Charges, Exhibit No. 55, pages 6 and 9	$ 441,573 00	$ 453,994 00	$ 621,608 00
GRAND TOTAL—ALL EXPENSES	$1,250,618 00	$1,405,459 00	$1,682,717 00
NET SURPLUS	$ 71,409 00	$ 172,076 00	$ 202,090 00
NET SURPLUS PER MILE OF ROUTE:	$ 862 00	$ 2,079 00	$ 2,439 00

HAMILTON, GUELPH, ELMIRA LINE

NOTES RE REVENUE AND EXPENSES

RATES

Passenger—Standard, 2.875c per mile.
Interurban average 2¼-2½ per mile.
Urban average 1½c per mile.

Freight—Standard rate in effect on steam railways as of 30th May, 1920, which has been increased by 40% in August, 1920. Full details of total not available.

Interest—6%.

Sinking Fund—1% starting 1935. Based on Capital outlay of $7,192,000.00.

Depreciation—Various rates. Consideration being given different classes of assets.

Taxes—Various rates. No provision made for increase of rate or assessment in respect of future periods.

Car Rentals—Standard rates. Amount included in General Expenses.

Power—Estimated used: 1st year ..... 2,500 — 3,000 H.P.
5th year ..... 2,750 — 3,250 H.P.
10th year ..... 3,000 — 3,500 H.P.

Cost—1925, 1930, 1935:

At Dundas	$15 50 per H.P.
At Galt	23 00 " "
At Waterloo	21 00 " "
At Guelph	20 00 " "

Passenger Revenue—Summary Exhibit No. 55, page 7, shows greater revenue than the details in Exhibit No. 56, pages 3, 5 and 7, as follows:

1925	$69,000 00
1930	81,000 00
1935	95,000 00

In arriving at passenger revenue certain benefits it was estimated, would accrue from connection with other lines of the system and the above figures, therefore, have been embodied in the statement.

TORONTO SUBURBAN LINE

SUMMARY OF REVENUE AND EXPENSES

PREPARED FROM ESTIMATES SUPPLIED HYDRO-ELECTRIC RADIAL COMMISSION BY HYDRO-ELECTRIC POWER COMMISSION

	1921	1925	1930
Miles of Route	71.31	73.31	73.31
Population Served	.....	.....	.....
REVENUE:			
Passengers	$ 434,751 00	$ 671,860 00	$ 860,880 00
Freight	48,000 00	276,400 00	313,500 00
Miscellaneous	71,000 00	92,200 00	110,000 00
Total Revenue, Exhibit No. 67, p. 5	$ 553,751 00	$1,040,468 00	$1,284,380 00
Passenger Revenue per mile of route	$ 6,183 00	$ 9,164 00	$ 11,743 00
Freight Revenue per mile of route	682 00	3,770 00	4,276 00
Miscellaneous Revenue per mile of route	1,010 00	1,257 00	1,505 00
Total Revenue per mile of route	$ 7,875 00	$ 14,191 00	$ 17,524 00

Passenger Revenue per capita:			
Guelph	$ 6 11	$ 6 18	$ 6 16
Suburban	——	14 18	15 05
Woodbridge	15 86	15 95	15 63
Local	——	——	——
All passengers	——	——	——
EXPENSES:			
Operating Expenses:			
Maintenance of Way and Structure	$ 82,308 00	$ 86,210 00	$ 86,210 00
Maintenance of Equipment	61,420 00	92,695 00	115,340 00
Power Expenses	99,150 00	117,980 00	135,075 00
Conducting Transportation	141,301 00	221,670 00	252,640 00
General Expenses	41,430 00	84,227 00	95,843 00
Depreciation	62,824 00	70,544 00	75,539 00
Total Operating Expenses Exhibit No. 67, p. 3	$ 488,433 00	$ 673,326 00	$ 760,647 00
Operating Ratio	88.2%	64.7%	59.2%
Operating Charge per mile of route	$ 6,947 00	$ 9,184 00	$ 10,376 00
Fixed Charges:			
Taxes	$ 6,000 00	$ 6,000 00	$ 6,000 00
Interest	135,574 00	$ 176,126 00	$ 186,830 00
Sinking Fund	.....	.....	29,159 00
Total Fixed Charges, Exhibit No. 67, page 3	$ 141,574 00	$ 182,126 00	$ 221,989 00
GRAND TOTAL ALL EXPENSES	$ 630,007 00	$ 855,452 00	$ 982,636 00
NET SURPLUS OR DEFICIT	$ 76,256 00	$ 185,016 00	$ 301,744 00
NET SURPLUS PER MILE OF ROUTE	$	$ 2,524 00	$ 4,116 00

TORONTO SUBURBAN LINE
NOTES RE REVENUE AND EXPENSES
RATES

Passenger—Standard 2.875c per mile.
Interurban—Average, 2¼-2½c. per mile.
Suburban—Average 1½c per mile.

Freight—Standard rate in effect on Steam Railways on 30th May, 1920, which has been increased by 40% in August, 1920. Full details as to manner in which total was made up not available.

Sinking Fund—1% starting 1930. Based on capital outlay of $2,915,900.00.

Interest—4½% and 6%. 4½% Bonds assumed, 1961, $2,628,000.00.
6% New Issue, 50 years, $287,900.00.

Depreciation—Various rates. Consideration being given to different classes of assets.

Taxes—Various rates. No provision made for increased rate or assessments as to future periods.

Car Rental—Standard rates. Amount included in General Expense.

Power—Estimates used:

1921 — 2,100 — 2,300 H.P.
1925 — 2,300 — 2,500 H.P.
1930 — 2,500 — 2,700 H.P.

Cost:—Islington 1921, 1925, 1930 ..... $23.00 H.P.
Local, 1921, 1925, 1930 ..... 24.00 H.P.

Revenue shows large improvement in 1929-1935, because of proposed extension of Lake Shore—which will allow passengers and freight to be brought into the Toronto Terminal.

Passenger Revenue per Capita—Certain information as to population was not included in the Hydro Electric Power Commission's estimates, so we were unable to complete these figures.

The surplus for 1930 appearing in the foregoing statement is less by $119,159.00 than the surplus shown by the Hydro Electric Power Commission estimates, as per Exhibit No. 67. This difference is made up as follows:

Sinking Fund charge shown in details, but not carried to the summary, Exhibit No. 67	$29,159 00
Error in addition of summary, Exhibit No. 67	90,000 00
Difference as above	$119,159 00

NIAGARA CENTRAL LINE

SUMMARY OF REVENUE AND EXPENSES

PREPARED FROM ESTIMATES SUPPLIED HYDRO-ELECTRIC RADIAL COMMISSION BY HYDRO-ELECTRIC POWER COMMISSION

	1921	1926	1931
Miles of Route	61.55	61.55	61.55
Population Served	98.441	113.169	130.246
REVENUE:			
Passenger	$ 645.584 00	$ 799.633 00	$ 961.218 00
Freight	343,796 00	514,327 00	560,533 00
Miscellaneous	63,440 00	64,560 00	72,472 00
Total Revenue, Exhibit No. 69, p. 5	$1.052,820 00	$1,378,520 00	$1.594,223 00
Passenger Revenue, per mile of route	$ 10,488 00	$ 12.991 00	$ 15.617 00
Freight Revenue per mile of route	5,585 00	8,356 00	9,107 00
Miscellaneous Revenue per mile of route	1.030 00	1,049 00	1,177 00
Total Revenue per mile of route	$ 17,103 00	$ 22,396 00	$ 25.901 00
Passenger Revenue, per capita:			
Ubran—Niagara Falls	$ 5 10	$ 5 20	$ 5 30
St. Catharines	3 60	4 10	5 00
Interurban—Main Line	9 10	9 40	9 50
Welland	6 90	7 10	7 20
Lake Shore	12 00	12 00	12 00
All passengers	6 55	7 04	7 38
EXPENSES:			
Operating Expenses:			
Maintenance of Way and Structures	$ 132,600 00	$ 138,600 00	$ 145,600 00
Maintenance of Equipment	108,854 00	128,509 00	137,963 00
Power Expense	63,352 00	69,875 00	74,877 00
Conducting Transportation	299,503 00	339,535 00	365,152 00
General Expense	119,155 00	149,286 00	161,610 00
Depreciation	78,850 00	78,850 00	78,850 00

Total Operating Expenses, Exhibit No. 69, p. 3.....	$ 802,314 00	$ 904,655 00	$ 964,052 00
Operating Ratio	76.2%	65.6%	60.4%
Operating Charge per mile of route	$ 13,035 00	$ 14,698 00	$ 15,663 00
Fixed Charges:			
Taxes	$ 15,000 00	$ 15,000 00	$ 15,000 00
Interest	214,154 00	257,774 00	298,514 00
Sinking Fund	.....	.....	43,638 00
Total Fixed Charges, Exhibit No. 69, page 5.....	$ 229,154 00	$ 272,774 00	$ 357,152 00
GRAND TOTAL, ALL EXPENSES	$1,031,468 00	$1,177,429 00	$1,321,204 00
NET SURPLUS	$ 21,352 00	$ 201,091 00	$ 273,019 00
NET SURPLUS, PER MILE OF ROUTE	$ 347 00	$ 3,267 00	$ 4,436 00

NIAGARA CENTRAL LINE

NOTES RE REVENUE AND EXPENSES

Rates:
Passenger.
Freight—Those in effect in May, 1920.
Interest—4½%, 5% and 6%.

Bonds assumed, 1929, 5%	$1,098,000 00
Bonds assumed 50-year, 4½%	$2,446,374 90
	$3,544,374 90

Depreciation—Various rates—according to class of asset.
Taxes—Various rates—no provision made for future increase of assessment or rates.
Car Rentals—Standard rates—charge included in General Expenses.
Sinking Fund—1% starting 1931. Based on capital outlay of $4,363,800.00.
Power—Estimated used—

1921 — 2,750 — 2,900 H.P.
1926 — 3,000 — 3,200 H.P.
1931 — 3,450 — 3,600 H.P.

Cost: 1921, 1926, 1931:
At Niagara Falls ..... $20.00 per H.P.

Operating Expenses for 1921 are less by $999.00 than shown in Exhibit No. 69, the difference being an error in addition in Hydro Power estimate.

Fixed Charges for 1931 are more by $15,000.00 than shown in Exhibit No. 69; this difference arising from neglect to carry estimated taxes for that year to the summary.

Revenue Estimates based on assumption that certain benefits will accrue from other lines of the system.

Passenger Revenue as per Exhibit No. 69, page 4, is more than shown in details, as per Exhibit No. 70, page 1, to the following extent:

1925	$27,710 00
1930	$33,700 00

The larger figures have been used.

APPENDIX 5

(Signed) "R.F.S."
" "A.F.M."
" "W.A.A."
" "C.H.M."

STATEMENTS SHOWING APPORTIONMENT OF COST OF THE PROPOSED HYDRO ELECTRIC RADIALS PREPARED FROM DATA SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION
JULY 26TH, 1921.

STATEMENT SHOWING APPORTIONMENT OF COST OF THE PROPOSED HYDRO ELECTRIC RADIALS PREPARED FROM DATA SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION.

Particulars	Mileage	Cost as submitted to voting units Exhibit No. 49	Population served Exhibit No. 58 Page 1	Cost per Capita of Population served	Total Population Exhibit 58 Page 1	Voting as per Exhibit No. 49 Total No. of votes cast	In favor of project	Against project	Date submitted to voters and result of voting Exhibit No. 49, page 3
TORONTO, PORT CREDIT, HAMILTON, ST. CATHARINES LINE:									
TOWNSHIPS—									
Toronto	6.45	$ 243,087.00	1,300	187.00	4,721	416	291	125	January 1917—Approved
Etobicoke	2.53	401,335.00	1,800	223.00	5,883				Not submitted.
Trafalgar	8.01	538,735.00	1,280	421.00	3,386	199	174	25	January 1917—Approved
Nelson	4.71	374,812.00	800	469.00	2,540	231	150	81	March 1919—Approved
East Flamboro	4.01	266,626.00	700	381.00	2,258	261	144	117	January 1917—Approved
West Flamboro		66,669.00	350	190.00	2,432				Not Submitted.
Barton	.51	284,484.00	7,000	40.75	7,445	790	416	374	January 1917—Approved
Saltfleet	8.97	1,002,296.00	3,500	287.00	3,798	345	104	241	March 1919—Defeated
North Grimsby	4.95	424,077.00	1,500	283.00	1,660	334	194	140	January 1917—Approved
Clinton	5.53	473,746.00	2,000	237.00	2,245	248	219	29	January 1917—Approved
Louth	5.87	563,595.00	1,000	563.00	2,141	282	275	7	January 1917—Approved
Grantham	1.41	128,280.00	500	256.00	3,228	477	382	95	January 1917—Approved
VILLAGES—									
New Toronto	1.29	82,250.00	1,863	44.00	1,863				Not submitted.
Port Credit	1.86	54,050.00	1,061	51.00	1,061				Not submitted
Grimsby	1.16	101,817.00	1,768	58.00	1,768	218	159	59	January 1917—Approved
Beamsville	1.08	51,469.00	1,116	46.00	1,116	188	165	23	January 1917—Approved
TOWNS—									
Mimico	1.01	111,200.00	2,098	53.00	2,098				Not Submitted.
Oakville	1.14	203,098.00	2,794	73.00	2,794	305	268	37	January 1917—Approved
Burlington	1.34	144,536.00	2,530	57.00	2,530	373	250	123	January 1917—Approved
CITIES—									
Toronto	5.25	4,240,196.00	473,829	8.90	473,829				Not submitted
Hamilton	5.69	5,869,286.00	107,832	55.00	107,832	9,607	6,172	3,435	January 1917—Approved
St. Catharines		623,750.00	19,070	32.75	19,070	1,424	1,049	375	January 1917—Approved
	72.77	$16,249,394.00							

NOTES

1. With regard to mileage in Townships, Towns, Villages and Cities it was explained by the Hydro Electric Power Commission that neither the mileage nor the cost within Townships, etc., was used as a basis to apportion cost, excepting in one or two instances; but that each township, etc., was treated as a partner in the whole project; and that the cost was apportioned on what is referred to by the Hydro Electric Power Commission as an "Equalized Assessment" plan.
2. The figures showing estimated population served for the Cities of Toronto, Hamilton and St. Catharines have never been prepared, so that the per capita cost has been based on the total population in each of these cases.
3. Subsequent estimates of population served, prepared by the Hydro Electric Power Commission, are proportionately much higher than the above in a number of cases.
4. It will be noted that no mileage figure appears opposite the amount apportioned to West Flamboro. The reason for this is, as explained by the Hydro Electric Power Commission that actually the proposed line does not enter this township but that it runs adjacent to the township line, close enough to render service; hence the apportionment of the amount stated above.

STATEMENT SHOWING APPORTIONMENT OF COST OF THE PROPOSED HYDRO ELECTRIC RADIALS; PREPARED FROM DATA SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION.

Particulars	Mileage	Cost as submitted to voting units Exhibit No. 44	Population served Exhibit No. 64 Page 1	Cost per Capita of Population served	Total Population Exhibit 44 Page 2	Voting as per Exhibit No. 44 Total No. of votes cast	In favor of project	Against project	Date submitted to voters and result of voting Exhibit No. 44
TORONTO EASTERN RAILWAY									
Townships—									
York	2.86	$ 381,587.00	34,278	11.00	34,278	262	252	10	January 1920—Approved
Scarborough	10.09	892,686.00	4,000	223.00	6,034	553	464	89	November 1919—Approved
Pickering	9.99	482,050.00	3,600	134.00	4,268	509	473	36	October 1919—Approved
West Whitby	2.15	280,304.00	800	350.00	1,691	170	158	22	November 1919—Approved
East Whitby	2.98	299,943.00	1,400	213.00	3,097	345	301	44	November 1919—Approved
Darlington	5.59	429,680.00	1,200	358.00	3,426	210	186	24	November 1919—Approved
Towns—									
Whitby	2.56	277,955.00	3,469	80.00	3,469	390	347	43	November 1919—Approved
Oshawa	1.53	771,894.00	9,051	85.00	9,051	571	474	97	November 1919—Approved
Bowmanville	1.09	216,030.00	3,033	71.00	3,033	310	301	9	November 1919—Approved
City of Toronto	5.03	4,328,665.00	473,829	9.10	473,829	23,734	21,378	2,356	January 1920—Approved
	43.87	$8,360,794.00							

NOTES

1. With regard to Townships, Towns and the City of Toronto it was explained by the Hydro Electric Power Commission that neither the mileage nor the cost within the township etc., was used as a basis to apportion cost, excepting in the case of Toronto, but that each Township was treated as a partner in the whole project; and that the cost was apportioned on what is referred to by the Hydro Electric Power Commission as an "Equalized Assessment" plan.
2. In the case of York County and the City of Toronto figures showing the population served were not prepared, so that in each of these cases the total population has been used as the basis upon which per Capita Cost has been calculated.

STATEMENT SHOWING APPORTIONMENT OF COST OF THE PROPOSED HYDRO ELECTRIC RADIALS PREPARED FROM DATA SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION.

Particulars	Mileage	Cost as submitted to voting units Exhibit No. 57	Population served Exhibit No. 56 Page 2	Cost per Capita of population served	Total population Exhibit 56 Page 1	Voting as per Exhibit No. 57 Total No. of votes cast	In favor of project	Against project	Date submitted to voters and result of voting Exhibit No. 57
HAMILTON, GALT, GUELPH AND ELMIRA LINE:									
TOWNSHIPS—									
Ancaster	7.72	$ 174,080.00	210	$ 829.00	4,621	672	425	247	January 1920—Approved
Flamboro West	.25	82,734.00	400	207.00	2,423	356	131	225	Januray 1920—Defeated
Beverly	12.29	241,464.00	1,640	147.00	3,139	506	323	183	January 1920—Approved
North Dumfries	6.89	157,817.00	950	166.00	1,892	145	80	65	January 1920—Approved
Waterloo	15.96	557,973.00	4,100	136.00	6,475	596	385	211	January 1920—Approved
Woolwich	5.89	283,687.00	1,671	170.00	3,546	311	284	27	January 1920—Approved
Puslinch	3.39	38,543.00	498	77.00	2,306				Not submitted
Guelph	5.95	92,549.00	1,074	86.00	2,403				Not submitted
VILLAGE of Elmira	.50	91,484.00	2,392	38.00	2,392	273	271	2	January 1920—Approved
TOWNS—									
Dundas	.80	168,942.00	1,252	135.00	5,009	401	319	82	January 1920—Approved
Waterloo	2.62	379,487.00	5,476	69.00	5,476	492	439	53	January 1920—Approved
Preston	1.80	281,615.00	5,184	54.00	5,184	470	317	153	January 1920—Approved
Hespeler	1.52	146,761.00	3,000	49.00	3,000				Not Submitted
CITIES—									
Hamilton	.69	607.173.00	107,832	5.60	107,832				January 1920—Approved
Galt	4.15	1,318,031.00	12,434	106.00	12,434	1,102	1,029	73	January 1920—Approved
Kitchener	4.87	1,053,080.00	23,000	46.00	23,000	1,581	1,174	407	January 1920—Approved
Guelph	6.36	855,239.00	18,000	47.00	18,000	1,347	1,099	248	January 1920—Approved
	81.65	$6,530,659.00							

NOTES

1. With regard to mileage in Townships, Towns, Village of Elmira and Cities it was explained by the Hydro Electric Power Commission that neither the mileage nor the cost within townships, etc., was used as a basis to apportion cost, excepting in certain instances, such as the City of Hamilton; but that each township, etc., was treated as a partner in the whole project; and that the cost was apportioned on what is referred to by the Hydro Electric Power Commission as an "Equalized Assessment" plan.
2. Exhibit No. 65, in which original population figures are set forth, shows total population by townships, etc., but does not give details of the population served; we have, therefore, used the figures set forth in Exhibit No. 56, both as to total population and population served. These were prepared, we understand, for the Radial Railway Commission and, as far as we can ascertain, are not materially different from the population figures shown in Exhibit No. 65 as to total.
3. It will be noted that "population served" figures have not been prepared in the case of each of the cities, and that total population figures have been used as a basis in calculating Per Capita Costs.

APPENDIX 6

(SIGNED) "R.F.S."
" "A.F.M."
" "W.A.A."
" "C.H.M."

PUBLIC DEBT OF CANADA FROM 1914 TO 1920.

As appears on page 42 Canadian Almanac, 1921.

Year.	Total Debt.	Total Assets	Net Debt
1914	$ 544,391,368 86	$ 208,394,518 72	$ 335,996,850 14
1915	700,473,814 37	251,097,731 16	449,376,083 21
1916	936,987,802 42	321,831,631 40	615,156,171 02
1917	1,382,003,267 69	502,816,969 89	879,186,297 80
1918	1,863,335,898 89	671,451,836 39	1,191,884,062 50
1919	2,676,635,724 77	1,102,104,692 33	1,574,531,032 44
1920	3,043,790,658 60	794,922,034 81	2,248,868,623 79

NOTE:—The figures given in 1920 for Total Assets include only Active Assets. Non-active Assets to the amount of $284,015,005.17 have been deducted. This amount, while not shown in this statement, is still carried in the books of the Finance Department as an asset.

STATEMENT OF INDEBTEDNESS
PROVINCE OF ONTARIO

Year	Direct	Indirect
1914	$ 40,405,535 96	$ 9,647,340 61
1915	49,389,366 71	10,345,849 28
1916	58,873,101 33	10,632,820 48
1917	61,795,108 42	19,064,317 87
1918	75,645,917 26	19,120,269 82
1919	97,572,781 47	19,205,142 45
1920	128,191,754 16	31,560,299 57

(Exhibit 235)

LIABILITIES OF THE PROVINCE OF ONTARIO. JUNE 15th, 1921

Direct Liabilities of the Province of Ontario, October 31, 1920		$128,191,754 16
PAID OFF SINCE:		
Treasury Bills, "GG"	$1,000,000 00	
Treasury Bills, "HH"	3,000,000 00	
Treasury Bills, "JJ"	5,000,000 00	
Treasury Bills, "KK"	6,000,000 00	
Inscribed Stock retired in London £36,250	176,416 00	15,176,416 00
		$113,015,338 16
ISSUES SINCE:		
Treasury Bills, "MM"	$ 1,000,000 00	
Treasury Bills, "NN"	10,000,000 00	
Loan "PP"	5,000,000 00	
Loan "RR"	16,000,000 00	
Loan "SS"	10,000,000 00	
Loan "TT"	15,000,000 00	57,000,000 00
		$170,015,338 16

SINKING FUNDS

To credit of Loans 1, 2 and 3	$ 1,387,300 58
Hydro Electric Sinking Funds,	835,622 63
General Sinking Fund Account, applicable to all loans	710,000 00

CHANGES IN NET DEBT, 1914-1920
CITY OF TORONTO

Year	Gross Debt	Sinking Fund	Net Debt	Increase	Decrease
1914	$ 75,249,388	$14,685,003	$60,564,385	$12,252,404	.....
1915	86,146,524	17,662,310	68,484,214	7,919,829	.....
1916	97,730,921	23,062,347	74,668,574	6,184,360	.....
1917	100,323,433	24,427,757	75,895,676	1,227,102	.....
1918	104,116,152	26,279,341	77,836,811	1,941,135	.....
1919	101,819,753	27,465,891	74,353,862	.....	3,482,949
1920	103,819,125	28,366,244	75,452,881	1,099,019	.....

See annual report of Commissioner of Finance, December 31, 1919.
The figures for 1920 were obtained at the City Hall.
(Exhibit 233)

HYDRO ELECTRIC POWER COMMISSION OF ONTARIO
STATEMENT OF EXPENDITURE, JUNE 16th, 1921.

	Appropriation	Expended
Queenston Development	$26,700,000	$17,150,000
Niagara System	5,515,000	1,475,000
Severn System	80,000	25,000
Eugenia System	200,000	75,000
Muskoka System	10,000	5,000
Wasdell System	75,000	25,000
St. Lawrence System	410,000	255,000
Rideau System	30,000	———
Thunder Bay System	1,996,700	1,450,000
Central Ontario System	1,318,000	750,000
Nipissing System	43,000	20,000
Miscellaneous	255,000	200,000
Essex County System	25,000	———
Expenditure on account of Province	280,000	70,000
TOTAL	$36,937,700	$21,500,000

(Exhibit 234)

ADVANCES TO HYDRO TO JUNE 15th, 1921

Advances to October 31st, 1920		
See Public Accounts, Statement No. 25		$66,312,501 10
Advanced in fiscal year 1921, to June 15th		21,500,000 00
		$87,812,501 10
Advances in Bonds in above Total:		
Series "R"	225,000	8,575,000 00
Series "M"	$8,350,000	

APPENDIX 7

(Signed) "R.F.S."
" "A.F.M."
" "W.A.A."
" "C.H.M."

THE SUPREME COURT OF ONTARIO

Osgoode Hall,
Toronto, July 7th, 1921.

Honorable W. E. Raney, K. C.,
Attorney General for Ontario,
Legislative Assembly Buildings, Toronto.

Dear Mr. Raney:

Re Radial Railway Commission.

On the 28th ultimo during Mr. R. S. Robertson's argument before the Commission our attention was directed to the following statement in the letter of Sir Adam Beck to the Honorable E. C. Drury, Prime Minister, dated June 11th, 1920, namely:

"2. Toronto-Port Credit-St. Catharines Railway. Reports and estimates were submitted in the year 1915 to the Municipalities between Toronto and Port Credit re the construction and operation of this section as a part of the Toronto to London line; by-laws were submitted in January of 1916 and for section between Port Credit and St. Catharines in 1917 and 1919 and were passed by large majorities. Fifteen Municipalities have executed agreements with the Commission authorizing the procedure with this work and assuming the responsibility for the railway and its operation between Port Credit and St. Catharines and have deposited with the Commission debentures for the full amount; the Commission has issued bonds to the extent of $11.360.363.00, all of which have been *guaranteed* by the Province."

Mr. C. C. Robinson, Counsel for the Hydro Electric Power Commission for Ontario, at page 12642 of the Record made this statement:—

"Mr. Robinson—But the bonds were guaranteed by the Government? The Hydro Electric Bonds were issued under the Act and in accordance with the Act and the Government guaranteed them in March, 1920.

"The Chairman: Then what bonds of the Hydro up to then had been issued with respect to this prospective line of railway?

"Mr. Robinson—$11,660,000 odd guaranteed by the Province under the Hydro Electric Railway Act."

There is some further reference and discussion.

Are we to understand from this that the Province has endorsed the bonds of the Hydro Electric Power Commission of Ontario in connection with a portion of the system of the Hydro Radial Railways we have under investigation to the extent mentioned, namely $11,360,363, and that these bonds to the total of that sum are available for expenditure in relation thereto, or have been in part resorted thereto for expenditures already made.

May we ask you to furnish us with a statement of how much moneys the Province has actually advanced to date to the Hydro Electric Power Commission of Ontario on account of the Hydro Radials system of railways under investigation, giving details as to when advanced and with respect to what part or parts of the system and the extent to which if any, the bonds mentioned as said to have been thus endorsed by the Province, have been pledged (or sold) to raise money thereon? Perhaps you might add where and by whom the bonds are now held.

Yours sincerely,
(Signed) R. F. Sutherland,
Chairman

The Hydro Electric Power Commission of Ontario,
University Avenue,
Toronto.

Dear Sirs:

Re Radial Railways Commission

Pursuant to instructions of the Commission I am to-day sending the original of the enclosed letter to the Attorney General. We thought at the same time a copy should be sent to you.

Yours sincerely, (Signed) R. F. SUTHERLAND,
Chairman.

Toronto, July 13th, 1921.

Dear Mr. Sutherland:

Toronto, Port Credit, Hamilton, St Catharines Railway.

Answering your letter of the 7th inst. I find that the facts referred to in the statement in Sir Adam Beck's letter to the Premier of the 11th June, 1920, and in the proceedings at page 12642 of the Record of the Hydro Radial Railway Commission Inquiry are as follows:—

On the 8th August, 1919, that is to say, before the present Government came into office, an Order-in-Council was passed authorizing the Hydro Electric Commission to proceed with the construction and equipment of an electric railway between Port Credit, Hamilton, and St. Catharines, and to issue bonds for the amount required for such undertaking.

On February 23rd, 1920, the secretary of the Commission wrote the Treasurer that the debentures required had been prepared and asked that they be endorsed as authorized by the Order in Council of August 8th, 1919. The secretary wrote:—

> "The purchase of right of way has been going on for some time and the Commission would be obliged if the matter of endorsing the bonds would receive early attention so that the necessary funds may be secured through the depositing of bonds to take care of the disbursements for right of way purchase and preparation for the construction of the lines."

The total amount of the bonds to be issued was $11,360,363.

It was represented to the Government that certain commitments had been made by the Commission and certain advances secured from the Bank and that it was necessary that the guarantee of these bonds should be duly executed in order that the Commission should be in a position to meet the obligations it had incurred.

The Government consented to the guarantee for the purpose of protecting the Commission against commitments already made; and it was not intended that any more bonds would be issued than were necessary for that purpose.

On various dates from the 10th March, 1920 until the 20th May, 1920, the Assistant Treasurer, Mr. Sproule, as authorized by the Order in Council, endorsed the guarantee of the province to the issue of the bonds and delivered them to the Hydro Electric Commission.

On July 6th, 1920, the Premier forwarded to the Chairman of the Hydro Electric Power Commission a copy of the statement of the attitude of the Government in connection with the various proposed radial railway schemes, including the announcement of the appointment of a Commission of Enquiry. That statement concluded with the following paragraph:—

> "The Commission will be requested to proceed immediately with its task, to hold public enquiries, and to report without unnecessary delay. In the meantime all action in the direction of further outlays or the assumption of further responsibilities in radial matters by the Hydro Electric Commission will be stayed."

The Premier's covering letter also contained the following statement:

> "Meantime we would request that pending the results of such enquiry further expenditure on these roads be not gone on with."

On the 23rd July, 1920, the Attorney General wrote to the secretary of the Hydro Electric Power Commission inquiring whether the Hydro Electric Power Commission had discontinued purchases for the right of way of the projected Toronto-Port Credit-Hamilton and St. Catharines Radial Line, and on the 29th July the secretary answered that the Commission had not acquired any right of way on the Toronto-Port Credit Line since July 1st, and that the total commitments on that section then amounted to $625,000.00, and that the total commitments on the Port Credit-Hamilton-St. Catharines section to the date of the letter amounted to $172,851.00. He added:— "The Right of Way Department is continuing to purchase right of way on this section."

On the same date the Attorney General wrote to the Premier enclosing a copy of his letter to Mr. Pope and a copy of Mr. Popes reply. Thereafter the Premier communicated verbally with the Commission calling their attention again to the terms of his communication of the 6th July and requesting that there should be no further purchases of right of way, and the Commission then discontinued further expenditures.

The absence of Mr. Clarkson from Toronto has delayed me in getting for you the further information requested in the last paragraph of your letter. I am told that he will be in Toronto today and I hope now to get a report from him covering these points without delay.

In the meantime I may just say that my understanding is that $1.200.000.00 of the issue of $11,360,000.00 of bonds referred to by Sir Adam Beck are deposited with the Bank of Montreal as collateral to the advance made by the Bank for purchases of right of way, and that the remainder of the issue are in the vaults of the Hydro Electric Power Commission unsigned and unsealed. These bonds of course are not available for expenditure unless the Government decides to proceed with the work.

Enclosed please find the following papers above referred to:—

1. Copy of Order in Council of 8th August, 1919, above referred to.
2. Copy of Mr. Drury's letter to Sir Adam Beck, dated 6th July, 1920.
3. Copy of Sir Adam Beck's letter acknowledging receipt dated 7th July, 1920.
4. Copy of Attorney General's letter to Mr. Pope dated 23rd July, 1920.
5. Copy of Mr. Pope's answer to Attorney General dated 29th July, 1920.
6. Copy of Attorney General's letter to the Premier, dated 29th July, 1920.

Yours sincerely,

(Signed) W E. Raney.

The Honourable,
R. F. Sutherland,
Osgoode Hall,
Toronto.

Enclos.

Sir Adam Beck,
Chairman, Hydro-Electric Commission,

Copy of an Order-in-Council approved by His Honour, the Lieutenant Governor, the 8th day of August, A. D., 1919.

Upon the recommendation of the Honourable the Attorney General and in accordance with the request of the Hydro-Electric Power Commission of Ontario the Committee of Council advise that pursuant to the Hydro-Electric Railway Act, 1914, and amendments thereto, the Hydro-Electric Power Commission of Ontario be authorized to proceed with the construction and equipment of an electric railway between Port Credit, Hamilton and St. Catharines as described in the Hydro-Electric Railway Act, 1919, and to issue bonds from time to time for the amount required for such undertaking.

The Committee further advise that the Treasurer of Ontario be authorized for and on behalf of the Province to guarantee the payment of the bonds so issued by the Commission.

And the Committee further advise that Charles Hood Sproule, Assistant Treasurer of Ontario, be designated as the Officer to sign the said guarantee on each of the above mentioned bonds on behalf of the Province of Ontario, and that the form of such guarantee shall be as follows:—

"By virtue of powers conferred by the Legislature of the Province of Ontario, Canada, the Province of Ontario hereby guarantees to the holder of the within bond for the time being and to the holder for the time being of any of the coupons attached thereto, due payment of the principal of the within debenture and of the interest thereon according to the tenor of the said debenture and of the coupons attached thereto."

Certified,
(Signed) J. Lonsdale Capreol,
Clerk, Executive Council.

Honourable E. C. Drury,
Prime Minister of Ontario,
Parliament Buildings,
Toronto.

Toronto, July, 6th, 1920..

My dear Sir Adam,—

In reply to the communications from the Hydro-Electric Commission of June 30th, regarding the Toronto Suburban Railway, and acquiring of the Niagara-St. Catharines and

Toronto Railway, I beg to say that the Government has given this matter its very full and careful consideration, and have decided, for the reasons set forth in the accompanying memorandum, to defer action in regard to the acquisition of these roads until such time as we have satisfied ourselves by means of a thorough enquiry as to the advisability of going on with this project. Meanwhile we would request that pending the results of such enquiry further expenditure on these roads be not gone on with.

This action is taken, I beg to assure you, not because of any feeling of lack of confidence in either Hydro-Electric projects in general or in the Hydro-Electric Commission, but because the Government, being responsible to the people of Ontario, feels that it should employ every means to fully inform itself of the feasibility and advisability of these great projects.

The enquiry will be pushed with all possible speed so as to avoid every unnecessary delay should the Government finally decide to proceed with the project.

Yours very sincerely,
(Signed) E. C. Drury.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO.
Office of the Chairman
190 University Ave.,
Toronto, July 7th, 1920.

Dear Mr. Drury:—

I beg to acknowledge receipt of yours of the 6th instant, together with enclosed memorandum, with respect to the communications from the Commission of June 30th.

Yours very truly,
(Signed) A. BECK,
Chairman.

Toronto, 23rd July, 1920.

My dear Sir:—

Might I enquire for the information of the Government whether the Hydro Electric Power Commission has discontinued purchases for the right of way of the projected Toronto-Port Credit-Hamilton and St. Catharines radial line, and if so when the discontinuance took effect; also what the total amount of the commitments under this head are to this date, approximately.

Yours sincerely,
(Signed) W. E. Raney.

W. W. Pope, Esq.,
Secretary,
Hydro-Electric Power Commission,
Toronto.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Office of the Secretary
190 University Ave.,
Toronto, July 29th, 1920.

Honourable W. E. Raney, K. C.,
Attorney General,
Parliament Buildings,
Toronto.

My dear Sir:—

Replying to your letter of enquiry of the 23rd instant, which came to hand on the 26th, I beg to say that the Commission has not acquired any right-of-way on the Toronto-Port Credit Line since July 1st. The total commitments on the Toronto-Port Credit Section amount to $625,000.00.

The total commitments on the Port Credit-Hamilton-St Catharines Section to this date

amount to $172,851.00. The Right-of-Way Department is continuing to purchase right-of-way on this section.

Yours truly
(Signed) W. W. Pope,
Secretary.

Toronto, 29th July, 1920.

Dear Mr. Drury,

Noticing a statement by Sir Adam Beck in his Oakville speech last week to the effect that the Hydro Commission was purchasing right of way in the Niagara Peninsula for the Toronto-Port Credit-Hamilton & St. Catharines line I wrote a letter of enquiry to Mr. Pope, the Secretary of the Commission, and I now enclose a copy of my letter along with a copy of Mr. Pope's reply.

You will note that Mr. Pope states that the Commission is continuing to purchase right of way on the Port Credit-Hamilton & St. Catharines section. In this connection I have to call your attention to the fact that the Toronto-Port Credit-Hamilton and St. Catharines line constitutes the first item of the proposals that have been referred to the Commission for consideration. (See page 4 of the Government's printed statement, a copy of which is attached to the Commission).

I have also to call your attention to the fact that the Government's statement forwarded to the Hydro Electric Power Commission on the 6th July concludes with the following sentence:—

"In the meantime all action in the direction of further outlays or the assumption of further "responsibilities in radial matters by the Hydro Electric Commission will be stayed."

Yours sincerely,
(Signed) W. E. Raney.

Hon. E. C. Drury,
Premier

Toronto, July 13th, 1921.

Dear Mr. Sutherland:

RE HYDRO RADIAL RAILWAYS

I now have from Mr. Clarkson a statement covering I think fully the information not conveyed by my former letter of today asked for by your letter of the 7th inst.

I have Mr. Clarkson's permission to say that if there is any explanation you require with regard to any of the matters covered by his letter he would be quite willing to furnish it by way of supplementary letter or by calling to see you.

Yours sincerely,
(Signed) W. E. Raney.

The Honourable,
R. F. Sutherland,
Osgoode Hall
Toronto

Enclos.

Toronto, July 13, 1921

W. E. Raney, Esq.,
Attorney General Province of Ontario,
Toronto, Ont.

Dear Mr. Raney:

RE HYDRO RADIAL RAILWAYS

In reply to your enquiry as to the amounts invested by the Hydro Electric Commission of Ontario in Hydro Radial Railways and the proportion thereof which have either been advanced in money or guaranteed by the Province I would state to October 31st, 1920, to the end of the last fiscal year of the Commission, the following amounts stood capitalized upon the books of the Commission in respect of the investments in Hydro Radial Railways:

(1)	In the Sandwich, Windsor and Amherstburg Railway	$2,255,500 95
(2)	In the Port Credit to St. Catharines Radial Railway	413,620 85
(3)	In the Toronto to Port Credit Railway	683,286 74
(4)	In the Toronto and Eastern Railway	43,946 40
(5)	In the St. Catharines & Niagara Falls Railway	25,984 29
(6)	In the Hamilton, Galt, Elmira & Guelph Railway	36,482 06
(7)	In the Hamilton, Brantford, Woodstock and London Railway	17,674 34

While in addition the Commission had also expended in respect of valuation of—

(8)	Niagara and St. Catharines and Toronto Railway	1,005 27
(9)	Toronto and Suburban Railway	5,604 86

Dealing with them in order—

Re Sandwich, Windsor & Amherstburg Railway

The investment of the Commission in the above undertaking amounted on October 31st, 1920, to $2,255,500.96 of which $2,039,000 was represented by forty year 4½% bonds of the Commission to April 1, 1920, guaranteed by the Province of Ontario, while the balance was made up of advances to the extent of $216,500.96, made by the Commission to the undertaking. Of these advances $200,000 were borrowed by the Commission from the Bank of Montreal against the security of $61,000 forty-year 4½% bonds of the Commission guaranteed by the Province and due on April 1, 1960, and $190,000 of bonds of the City of Windsor given in purchase of electrical works owned by the Railway Company and sold to the city by the Commission after the date of purchase.

From the above it will be seen that the total of the bonds outstanding and guaranteed by the Province is $2,100,000—$2,039,000 of which represented the purchase price of the undertaking and $61,000 held and later pledged for purposes of rehabilitation.

As against the guarantee of the Province given in respect of $2,100,000 of bonds above mentioned, eight municipalities have lodged their debentures with the Commission to the amount of $2,100,000 as security for payment of any operating, deficits on the capital cost of the undertaking. No cash advances have been made by the Province to the undertaking.

Since October 31st, 1920 the Commission on behalf of the undertaking has made application to the Government of the Province for the guarantee of upwards of $900,000 more of bonds for purposes of rehabilitation, extension and acquisition of equipment.

Re Port Credit to St. Catharines Railway.

The total amount invested by the Commission in the Port Credit to St. Catharines Railway to October 31st, 1920, was $413,620.85, of which $406,509.66 was expended in the fiscal year ending October 31st, 1920. In respect of this Radial Railway, the Province of Ontario has guaranteed bonds of the Commission under the Hydro Radial Railways Act to the amount of $11,360,-363, of which said bonds $1,200,000 stood deposited on October 31st, 1920, with the Bank of Montreal as security for the payment of advances then outstanding of $100,000. The remainder of the bonds, $10,160,363, stood on October 31st, 1920, guaranteed by the Province but unsigned by the Secretary of the Commission and unsealed by the Commission—on October 31st, 1920, they were in the possession of the Commission.

Since October 31st, 1920, and on or about the 28th of December, 1920, a further loan of $400,000 was obtained by the Commission from the Bank of Montreal on the security of $1,200,-000 of bonds mentioned which thereafter stood pledged for a total amount of $500,000.

With the investment of the Commission in the undertaking amounting to $413,620.85 on October 31st, 1920, and $100,000 only obtained at that time by borrowing (against $1,200,000 of bonds mentioned), the remaining $313,620.85 was expended out of moneys belonging to the power undertaking. The use of power funds for such purposes being unauthorized, the further loan of $400,000 was obtained on Dec. 28, 1920, to refund the same.

At the present time the obligation of the Province in respect of Toronto, St. Catharines Railway consist of the guarantee on its part of $11,360,363 of Hydro Radial bonds, of which $10,-160,363 are held by the Commission, not fully executed, and the remaining $1,200,000 are pledged to the Bank of Montreal for advances of $500,000. No cash advances have been made by the Province for the purposes of the Railway.

Re Toronto to Port Credit Radial Railway

To October, 31st, 1920, the expenditures of the Commission in connection with the Toronto to Port Credit Radial Railway amounted to $683,286.74, which expenditures were made upon the authority of a letter of Sir William Hearst, late Premier of the Province of Ontario, that if the Commission would obtain resolutions by the municipalities interested requesting the Government to introduce and pass all amendments to existing legislation that might be necessary to validate the building of an electric railway between Toronto and Port Credit, as part of the proposed Toronto to St. Catharines Hydro Electric Railway, so as to make the same legal, valid and binding upon the municipalities, that the Government would with the presentation to it of such resolutions support legislation to that effect. On the basis of these assurances and with resolutions of the municipalities in its possession, the Commission acquired certain rights of way and made other expenditures in connection with the railway out of funds held by it under the terms of the Power Commission Act. The expenditures so made to October 31st, 1920, amounted as before stated to $683,286.74. On October 31st, 1920, bonds of 6 municipalities to the amount of $5,109,573 stood deposited with the Commission under the terms of the Hydro Radial Act, but no bonds had been issued by the Commission neither had the Province entered into any guarantees in respect of the line. The $683,286.74 expended by the Commission upon the line can, however, fairly be said to be part of the funds advanced by the Province to the Commission under appropriations made for the purposes of the different power systems and undertakings operated and controlled by the Commission.

Re Toronto and Eastern Railway: $43,946.40.

St. Catharines & Niagara Falls Railway: $25,984.29.

Hamilton, Galt, Elmira & Guelph Railway, $36,482.06.

Hamilton, Brantford, Woodstock & London Railway: $17,617.34. Total, $124,087.09.

The above amounts expended by the Commission in respect of such Railways were made out of funds held by it for the benefit of power undertakings and without any apparent legal authority. No bonds have been issued by the Commission in respect of such railways or guarantees given by the Province.

On the Toronto and Eastern line the municipalities interested have passed by-laws and certain, but not all, of the agreements with the Commission have been executed.

On the St. Catharines and Niagara Falls line by-laws have not been submitted to or voted upon by the interested municipalities.

On the Hamilton, Galt, Elmira and Guelph line by-laws were carried by certain, but not all of the municipalities interested, and no agreements have been executed between any of the municipalities and the Commission.

On the Hamilton, Brantford, Woodstock and London line by-laws have not been submitted to or voted upon by the municipalities interested.

Moneys expended by the Commission in respect of valuations have been as follows:

Niagara, St. Catharines & Toronto Railway	$1,005 27
Toronto Suburban Railway	5,604 86
Total	$ 6,610 13

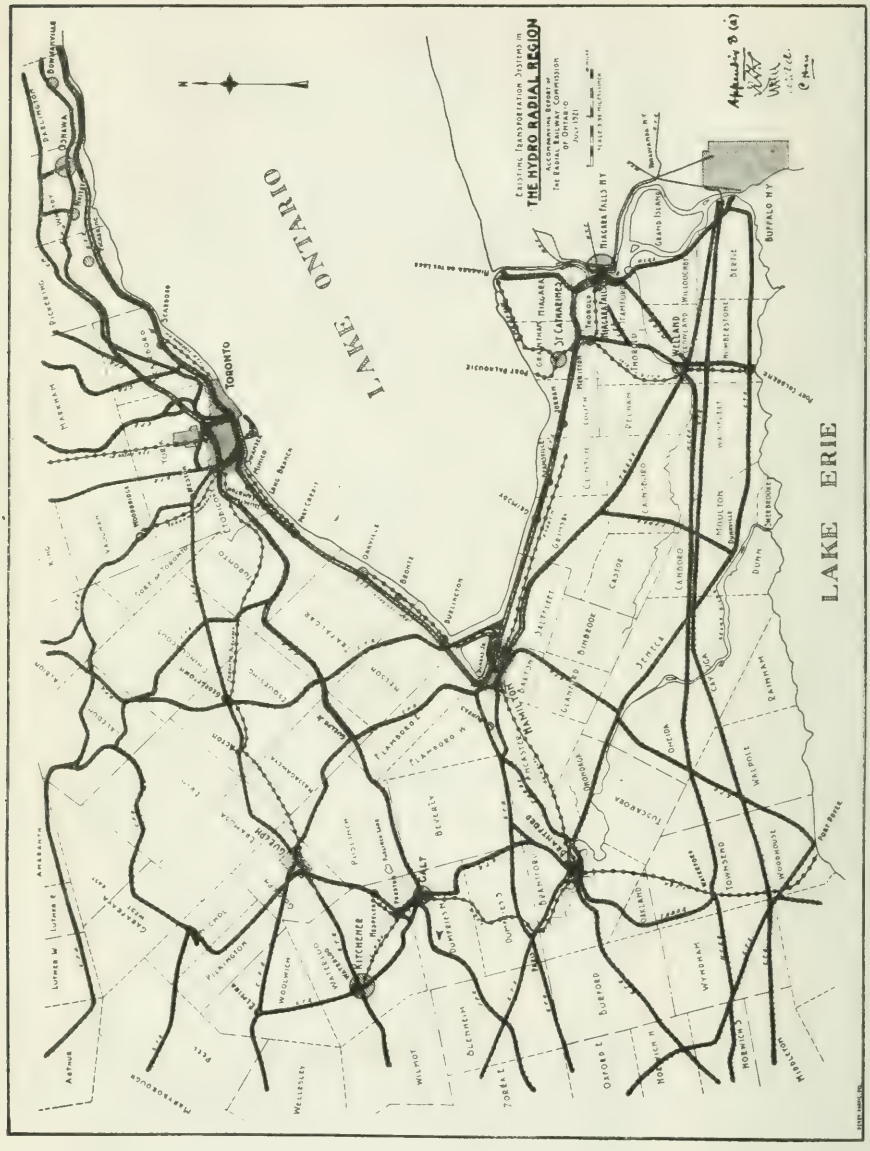
These expenditures were made out of the general funds of the Commission and there would not appear to be any statutory authority permitting disbursement of the same. No bonds have been issued by the Commission in the connection, neither is the Province under any liability in respect of the undertakings.

In addition to the amounts mentioned sums expended by the Commission in respect of the Hydro Radial investigation amounted to October 31st, 1920, to $44,704.09, which sums the Commission contends are repayable by the Province to it.

Yours truly,

(Signed) G. T. Clarkson.

TGC.


LAKE ONTARIO
LAKE ERIE
THE HYDRO RADIAL REGION
TORONTO
HAMILTON
BRANTFORD
GALT
KITCHENER
NIAGARA FALLS
BUFFALO N.Y.
ST CATHARINES
WELLAND
PORT COLBORNE
PORT DALHOUSIE
BRIDGEBURG
THOROLD
DUNNVILLE
SIMCOE
PORT ROWAN
PORT BURWELL
PORT STANLEY
PORT DOVER
PORT ROWAN
OSHAWA
WHITBY
PORT PERRY
BOWMANVILLE
NEWCASTLE
COBOURG
PORT HOPE
BELLEVILLE
TRENTON
PICTON
NAPANEE
KINGSTON
GANANOQUE
BROCKVILLE
PRESCOTT
CORNWALL
MORRISBURG
IROQUOIS
MATILDA
WILLIAMSBURG
CHESTERVILLE
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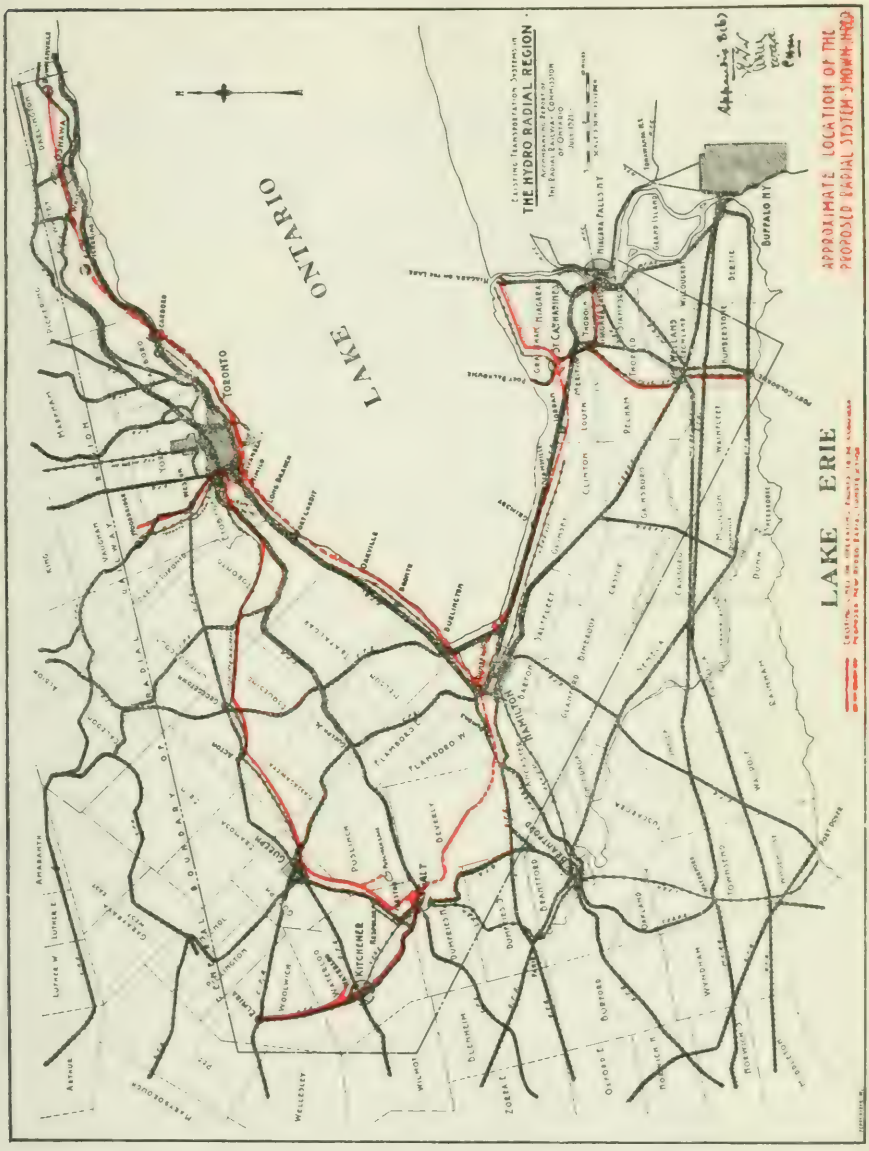
LAKE ONTARIO
LAKE ERIE
THE HYDRO RADIAL REGION
TORONTO
HAMILTON
BUFFALO N.Y.
NIAGARA FALLS N.Y.
APPROXIMATE LOCATION OF THE PROPOSED RADIAL SYSTEM SHOWN HERE

APPENDIX 9

(Signed) "R.F.S."
" "A.F.M.
" "W.A.A."
" "C.H.M."

REPORT OF THE FEDERAL ELECTRIC RAILWAYS COMMISSION.

The President of the United States.

Sir: The Federal Electric Railways Commission begs leave to present the following report.

This Commission was appointed by you in response to a suggestion outlining the need of such a commission in the following letter from two members of your Cabinet, the Secretary of Commerce and the Secretary of Labor:

Washington, D. C., May 15, 1919.

Dear Mr. President: The electric-railway problem to which your attention has been called on several occasions has recently assumed such serious national proportions as to warrant the prompt attention of the Federal Government. Already 50 or more urban systems, representing a considerable percentage of the total electric-railway mileage of the country, are in the hands of receivers. The communities affected are among the most important—New York, Providence, Buffalo, New Orleans, Denver, St. Louis, Birmingham, Montgomery, Pittsburgh, Memphis, Fort Wayne, Des Moines, St. Paul, Spokane, Chattanooga.

Other large systems are on the verge of insolvency, for the industry as a whole is virtually bankrupt. The continued shrinkage in the value of hundreds of millions of electric-railway securities held by savings banks, national banks, life-insurance companies, and by the public at large threatens to embarrass the Nation's financial operations. Furthermore, the withdrawal of this industry's buying power, which is said to rank third in magnitude, involves the unsettlement of collateral industries, naturally entailing labor dislocation that will affect hundreds of thousands of employees.

The return to normal conditions is being hampered and the efforts of the Government to avert strained conditions in finance, labor, and commerce are being less fruitful of satisfactory results than should be expected, if some solution of the electric-railway problem were in view.

What the solution is may, we believe, be evolved by a thorough investigation of general franchise and operating conditions in their relation to rates, including service-at-cost plans, State and municipal taxation, local paving requirements, and internal economies that may be effected.

We therefore propose and recommend the appointment by you of a Federal board or commission, whose duty it shall be to study and report upon the entire problem in order that the State and municipal authorities and others concerned may have the benefit of full information and of any conclusions or recommendations that may be formulated. Such a study will, in our opinion, exert a helpful and constructive force in this critical period of the industry's existence and will aid in the readjustment. If you would make such an appointment before June 30 your contingency fund could be used to defray the expenses, which would be about $10,000.

The National Association of State Commissioners has always invited Federal aid in this matter and the recent conference of governors and mayors adopted a resolution recommending Federal consideration of the problem of preventing the financial disaster threatening this industry.

We propose that such a commission shall be made up of one representative of each of the following groups: Treasury Department or War Finance Corporation, Department of Commerce, Department of Labor, National Association of State Commissioners, American Cities League of Mayors, Amalgamated Association of Street and Electric Railway Employees, American Electric Railway Association, Investment Bankers' Association of America.

We respectfully urge your authorization for such a commission. to be followed by your formal proclamation upon the selection of the personnel.

Cordially, yours,

William C. Redfield,
Secretary of Commerce.
W. B. Wilson,
Secretary of Labor

The Commission appointed by you on the 31st day of May, 1919, consisted of the following members, who were to serve and have served thereon without compensation:

Charles E. Elmquist, president and general solicitor of the National Association of Railway and Utilities Commissioners.

Edwin F. Sweet, Assistant Secretary of Commerce, representing the Department of Commerce.

Philip N. Gadsden, representing the American Electric Railway Association.

Royal Meeker, Commissioner of Labor Statistics, Department of Labor, representing that department.

Louis B. Wehle, General Counsel of the War Finance Corporation, representing the Treasury Department.

Charles W. Beall, of Harris, Forbes & Co., New York, bankers, representing the Investment Bankers Association of America.

William D. Mahon, president of Amalgamated Association of Street and Electric Railway Employees of America, representing that association.

George L. Baker, mayor of Portland, Oreg., representing the American Cities League of Mayors.

The Commission met on June 4, 1919, in Washington, D. C., and organized by electing Charles E. Elmquist as chairman and Edwin F. Sweet as vice chairman, and subsequently appointed Charlton Ogburn as its executive secretary. At its first meeting the Commission announced that it would attempt to determine the general principles which should govern the regulation, operation, and service of electric railways, but that the Commission was without authority to hear and determine specific local controversies, and that it would not undertake in any way to encroach upon the functions of State commissions or of municipal authorities; that the purpose of the Commission was rather to investigate and study the condition of the electric railway industry, including franchises, rates, taxation and assessments, economies of operation, public relations, regulation, etc.

The Commission gathered its testimony mainly in two ways: First, by public hearings, at which 95 witnesses testified in person and 21 others sent prepared statements; second, by a series of questionnaires sent to every city in which there is a street or interurban railway, addressed to the electric railways, the mayors, chambers of commerce, and the central labor unions, and also to all of the State public utility commissions.

The first public hearing was held in New York on June 19,1919. The next hearing was held in Washington on July 15, lasting two weeks, during which time the witnesses on behalf of the electric railways presented evidence under the direction of the committee of one hundred of the American Electric Railway Association. The next hearing was in Washington beginning Augusa 11, and lasted one week, testimony being offered on behalf of the public, chiefly by representatives of the municipalities and all State public utility commissions. At the last hearing held in Washington, beginning September 29, and lasting one week, testimony was offered by further witnesses representing the public and by witnesses on behalf of labor, represented by the Amalgamated Association of Street and Electric Railway Employees of America. All of these hearings ran through day and night sessions, beginning at 10 a.m. and usually continuing until 10 or 11 p.m., and totaling one month.

Among the witnesses were ex-President William H. Taft, Secretary of War Newton D. Baker, leading bankers, railway managers, economists, mayors, public utility experts, and State public utility commissioners.

The testimony taken embraces 6,195 pages of typewritten transcript.

Three separate questionnaires were later sent out. The first was general, dealing with all phases of the situation. The last two were special, seeking traffic figures, month by month, for the past three years—that is, as to the number of revenue passengers, amount of passenger revenue, fare charges, and any occurrences affecting traffic, such as strikes, influenza epidemic, and the like.

At the conclusion of the final public hearing the Commission engaged the services of Dr. Delos F. Wilcox to aid in analyzing the testimony gathered and to make suggestions to the Commission with reference to its report. Dr. Wilcox made a very comprehensive analysis of the

evidence, containing 823 pages of matter. The Commission regrets that it can not publish this analysis with the proceedings, since it represents a complete and masterful study of the whole electric railway problem. Printed with the evidence, however, is a summary of the Wilcox report, prepared by him. The answers to the questionnaires resulted in bringing to the attention of the Commission a great mass of information. All the evidence, exhibits, analysis of Dr. Wilcox, and tabulated summaries of information found in the answers to the questionnaires have been considered by this Commission.

The final meeting of the Commission was held in Washington, July 22 to 27, 1920, inclusive, for the purpose of formulating this report.

Owing to the divergent representation of its personnel, this unanimous report of the Commission necessarily represents decided concessions by some of its individual members.

A complete report of the testimony will be printed, together with this report, and will be placed in the Congressional Library in Washington and other leading libraries in the country, with all regulatory commissions, and with the mayors of the leading cities of the United States.

For convenience, we wish, before proceeding to our discussion, to state our principal conclusions and recommendations, which are as follows:

Section I.

CONCLUSIONS AND RECOMMENDATIONS

I. The electric railway furnishing transportation upon rails is an essential public utility and should have the sympathetic understanding and co-operation of the public if it is to continue to perform a useful public service.

II. The electric railway has been and will continue to be a public utility, subject to public control as to the extent and character of the service it renders and as to the rates it charges for such service.

III. It is of the highest importance that both the total cost of the service and the cost to the individuals who use it shall be kept as low as possible without injustice to those who take part in producing it.

IV. The electric railway industry as it now exists is without financial credit and is not properly performing its public function.

V. This condition is the result of early financial mismanagement and economic causes accentuated by existing high-price levels of labor and materials, and of the failure of the uniform unit fare of 5 cents prescribed either by statute or by local franchise ordinances or contracts to provide the necessary revenues to pay operating costs and to maintain the property upon a reasonable basis.

VI. The industry can be restored to a normal basis only by the introduction of economies in operation, improving the tracks, equipment, and service, and assuring a reasonable return upon the fair value of its property used in the public service when honestly and efficiently managed.

VII. The electric railways must expand to meet the growing needs of their communities; therefore, the first essential is to restore credit in order to obtain necessary new capital for the extension and improvement of service.

VIII. Restoration of credit involves a readjustment of relations which will remove public antagonism, provide public cooperation, and insure to the investor the integrity of his investment and a fair rate of return thereon.

IX. Effective public cooperation should be exercised by eliminating, in so far as it is practicable, special assessments for sprinkling, paving, and for the construction and maintenance of bridges which are used by the public for highway purposes.

X. Extensions into new territory resulting in special benefits to the property in that vicinity should be paid for by assessments on such property in proportion to the benefits received, and that the amount of such assessment should not be added to the physical value of the corporate property.

XI. The great increase in the use of private automobiles, the jitney and motor busses has introduced a serious although not a fatal, competition to the electric railway. These forms of

public motor conveyance when operated as public carriers should properly be subject to equivalent regulatory provisions.

XII. The full cooperation of labor is essential to the highest prosperity and the usefulness of the industry. The employees engaged in this occupation should have a living wage and humane hours of labor and working conditions. They should have the right to deal collectively with their employers, through committees or representatives of their own selection. All labor disputes should be settled voluntarily or by arbitration, and the award of such a board should be final and binding upon both parties. It is intolerable that the transportation service of a city should be subject to occasional paralysis, whether by strikes or by lockouts.

XIII. A private industry should not be subsidized by public funds unless it is imperatively necessary for the preservation of an essential service, and then only as an emergency measure.

XIV. Unless the usefulness of the electric railways is to be sacrificed public control must be flexible enough to enable them to secure sufficient revenues to pay the entire cost of the service rendered, including the necessary cost of both capital and labor.

XV. There can be no satisfactory solution of the electric-railway problem which does not include the fair valuation of the property employed in the public service, and where that is done the companies should voluntarily reduce any excessive capitalization to the basis of such value.

XVI. There is no insuperable objection to a large, wide-open city having exclusive jurisdiction over the rates and services of public utilities.

XVII. The necessity for scientific and successful regulation of systems, whether large or small, and especially those which operate through several cities and villages and in rural territory, leads to the conclusion that local regulation should generally be subject to the superior authority of the State, whether as a matter of original jurisdiction or through the medium of appeal.

XVIII. Cost-of-service contracts are in the experimental stage, but where tried they seem to have secured a fair return upon capital, established credit, and effected reasonably satisfactory public service. Such contracts may safely be entered into where the public right eventually to acquire the property is safeguarded.

XIX. The right of the public to own and operate public utilities should be recognized, and legal obstacles in the way of its exercise should be removed.

XX. While eventually it might become expedient for the public to own and operate electric railways, there is nothing in the experience thus far obtained in this country that will justify the assertion that it will result in better or cheaper service than privately operated utilities could afford if properly regulated.

XXI. Public ownership and operation of local transportation systems, whether or not it be considered ultimately desirable, is now because of constitutional and statutory prohibitions, financial and legal obstacles, the present degree of responsibility of our local governments, and the state of public opinion, practicable in so few instances, that private ownership and operation must as a general rule be continued for an extended period.

XXII. If the reforms incident to public regulation which we suggest in this report should not result in making private ownership satisfactory to the public, such reforms should at least enable public ownership to be established upon a just and equitable basis.

SECTION II

THE STREET RAILWAY IS AN ESSENTIAL INDUSTRY

The electric railway industry at present is a factor of essential importance in the urban life and, to a scarcely less extent, in interurban relations of the country.

The experience of 75 years, the unanimous opinion of expert witnesses, and of those who are students of transportation problems, and the assumption of the necessity for tracks by inventors working to improve the methods of street transportation alike demonstrate the fundamental and permanently essential nature of the railway—and to the present time of the electric railway—as the most nearly adequate, reliable, and satisfactory system available for transporting

the maximum number of people through the streets of our cities with the least interference with the use of these streets for other purposes of public ways.

The Bureau of Census Reports for the year 1917 show the net capitalization as of December 31, 1917, to be $4,869,962,096, which makes this industry one-fourth as important as the steam railroads of the country in point of capitalization. The total mileage in 1917 was 44,835. The net capitalization per mile of track is $109,065. The total revenue for 1917 from railway operations was approximately $650,000,000. These statistics do not include the electrified portions of steam railroads engaged in suburban service. Approximately 40 per cent. of the mileage is suburban in character.

The number of people with whom the electric railways come into daily contact is shown by the fact that in the year 1917 they carried a total of 11,304,660,462 revenue passengers and 3,202,254,111 transfer and free passengers, as compared with a total of 1,066,638,474 revenue passengers carried by the steam roads.

In spite of the immense development of the automobile industry the demand for electric railway transportation has increased at a rapid rate. It is estimated that on December 31, 1917, there were 4,643,481 passenger automobiles and that two-thirds of the development of that industry was subsequent to 1912, but the number of revenue passengers carried by the electric railways was approximately 1,800,000,000 more in 1917 than in 1912. During the year ended June 30, 1919, the total number of revenue passengers carried by the local transportation lines of New York City was 2,079,942,604, as compared with 1,402,417,642 carried during the year ended June 30, 1909, an increase of more than 46 per cent. in 10 years. On the basis of the estimated population served the number of revenue rides per capita in New York City in 1909 was 304 and in 1919, 370—an increase of nearly 22 per cent. in the riding habit.

In this connection Mr. Henry G. Bradlee, president of the Stone & Webster Corporation, stated in a letter dated October 1, 1919, as follows:

"It would appear that something has been and is still stimulating the street railway business; possibly the automobiles themselves have helped in this direction. People may be acquiring to a greater extent than ever before the riding habit, and may be more and more inclined to move about and spend less time in their own home or with their own neighbors. The moving picture is probably also a factor in the situation, but whatever may be the cause, the facts seem pretty clear that the demand for transportation service is still growing apace. This fact, I think, is generally not understood; in fact, I am free to confess that we ourselves were surprised to see the extent of the increased demand for service."

In 1917 the number of employees was 294,826, and it is estimated that the total number of people who were directly and conveniently accessible to electric railway service is about 80,000,000 at the present time. The electric railways have overflowed municipal boundaries and now include a network of interurban lines in many portions of the country, but the fact still remains that the industry is primarily a street railway with its principal function the transportation of passengers within the limits of municipalities.

While the electric railway industry is essentially local, it has certain national characteristics. Its difficulties can not be regarded simply as the isolated problem of a local system repeated hundreds of times all over the country in varied forms and degrees, each problem being independent of all the others. On the contrary, although a local traction system may be separated by hundreds of miles from its nearest neighbor, it is in other ways inseparably connected with all of the others. As a purchaser in the equipment markets of other States it competes with other companies. Its demands for labor and its scales of wages are necessarily felt at once by traction systems everywhere. In procuring its capital its officers have been generally compelled to market its securities to a large extent in other States, among investors who are particularly interested in such classes of investment. The close industrial and Financial interdependence of the hundreds of physically unrelated local traction systems, the millions of dollars of capital placed by thousands of investors in plants which manufacture electric traction equipment, and the five billion of electric traction bonds and stocks to be found scattered all over the country in banks, insurance company reserves, and in private investment, translate the many local problems into a national problem.

SECTION III

FINANCIAL CONDITION OF THE ELECTRIC RAILWAY INDUSTRY

The investigation demonstrates that the financial condition of the electric railway industry is acute, and that to a very great extent it is not properly performing its public functions.

The record in this case shows that on May 31, 1919, there were 62 companies, having a mileage of 5,912, in receivership, that 60 companies had dismantled and junked altogether 534 miles of railways, and that 38 companies together had abandoned 257 miles of track. Since that date and up to July 1st, 1920, there have been 56 additional companies, having a mileage of 1,908, which have been thrown into receivership.

The capitalization of the industry, according to the 1917 census report, is represented by $3,058,377,167 in bonds and $2,473,846,651 of stock. For the year 1917 the net income of operating companies was $56,450,930, representing an average rate of return of 2.81 per cent. upon the capital stock. In 1918 the evidence shows the net income was reduced to $20,183,413, which represents a return of only 1 per cent. As a whole, there has been some improvement in the industry since the commencement of these hearings, due to the fact that there has been an increase in the car-riding habit since demobilization, and in a great many instances the fare has been increased beyond 5 cents. In spite of this slight improvement, however, the condition of the industry at the present time is serious. A great many companies are unable properly to maintain their track and equipment and to perform efficient public service, to secure funds with which to purchase new equipment, to build necessary improvements and extensions, or to refund maturing obligations.

A large number of factors have contributed to the present plight of the electric railway industry. These may be mentioned:

(a) They were not conservatively financed in their early years, and have not since made good their over capitalization, except to a limited extent, otherwise than through the process of bankruptcy and reorganization. In the early days the promoters of electric railway properties believed that long-term franchises with a 5-cent fare would be permanently profitable. Large sums of money were required to develop the business. In many cases the promoters issued bonus stock to represent their hopes and expectations. This bonus stock did not represent money, service or property, and added nothing to the value of the plant. As a result of this practice, there are many cases where the existing capitalization exceeds the investment in the plant or the value thereof.

(b) Neglect to amortize this excess capitalization.

(c) Failure to amortize the normal accrued depreciation.

(d) Payment of unearned dividends and neglect of ordinary maintenance.

(e) Overbuilding into unprofitable territory or to promote real estate enterprises, involved sometimes with political improprieties.

(f) A uniform 5-cent fare, which established a constant rate to apply during variable cost periods. This contract fare has been a source of irritation, resulting in litigation. During normal times many communities sought to have the fare reduced below the contract price. The companies insisted upon adhering to the contract, and they were sustained by the courts. During the recent high-cost period many companies have applied for an increase in fare to enable them to meet operating expenses and fixed charges. In many cases communities undertook to prevent the increase beyond the contract rate. Under the decisions of the Supreme Court of the United States and of the highest courts of a number of States, it is now established that a franchise provision naming a certain rate of fare creates no vested right of any car rider but that such fare can be properly changed by appropriate legislation and substituted by a higher charge.

As indicative of the fact that the 5-cent fare has not been adequate during the war period, we need only to call attention to the fact that on July 1, 1920, increased fares have been allowed in over 500 selected cities;10-cent fares have been allowed in 69; 9-cent fares in two cities; 8-cent in 30 cities; 7-cent with 1-cent charge for transfers in 26 cities; 7cent zones in 6 cities; 7-cent in 145 cities; 6-cent zones, with 2-cent transfer charge, in 10 cities; 6-cent for two zones, with 2-cent per zone thereafter, in 13 cities; 6 cents for each two zones in 4 cities; 6 cents cash fare in some cases in 149 cities; 5-cent zones and elimination of reduced rate ticket in 50 cities.

Boston has a 10-cent fare. Chicago, Washington, Cincinnati, Kansas City, Youngstown, and other large cities are on an 8-cent basis.

It would seem that so long as the railways depend upon earning power, and earning power depends upon passenger revenue, the fixed uniform fare is a broken reed for the industry or for the community to lean upon. Perhaps the general sentiment of the electric railways is best expressed by the evidence of Gen. Guy Tripp before this Commission, as follows:

"We were all living in a fool's paradise in the street railway business when we suddenly woke up—when the war woke us up—to find that no business which can not increase its revenues under any conditions can live or is sound."

Conversely, it may be said that no community should bind itself by contract or otherwise to continue, after normal conditions have been restored, a rate which might be found reasonable during this abnormal period.

(g) Limited franchises which impair credit and toward the expiration of the franchise result in neglect of the maintenance of the property.

(h) Special taxation and franchise obligations, having particular reference to street paving, street sprinkling, construction and maintenance of bridges used by the general public, general taxation, etc.

The American Electric Railway Association introduced a chart which showed that the total amount of taxes levied against the properties in 1917 amounted to $45,756,695, of which taxes on real and personal property was $21,804,619, and on earnings, capital and other taxes $23,952,076, representing 10.11 per cent. of the operating expenses. In 1902 the ratio of taxes to operating expenses was 9.19 per cent. It is thus seen that there is only a small increase in the ratio of expense for this item since last year.

For the period from 1913 to 1918 the expenditures for all taxes, including paving and other imposts, has ranged from $60,000,000 to $65,000,000, corresponding to 10 per cent. of the operating revenues. The ratio varies very materially among the different plants.

The evidence on behalf of the companies therefore shows that on the basis of the 5-cent fare the taxes represent about one-half of a cent in the nickel which the car rider has been paying. and that they thus contribute materially to the necessity for fare increases. The argument has been made with considerable force that the car rider should not be required to pay for supporting the city's schools, its almshouses and other city institutions. It is contended that the company should be required to pay in taxes to the city only such an amount as would reimburse the city for its actual cost due to the presence of the street railway; and that such a plan of taxation alone would be consistent with the idea that the car fare should be based upon the real cost of rendering the actual service of transportation.

Although there is much force in this idea, and it should be borne in mind by all who are interested in street railway problems, we do not think the time is ripe for recommending its general adoption. The heavy taxation to which the companies are now subject came into being during the period of their prosperity and at a time when they were still essentially private concerns, relatively free from regulation. It was natural that their properties should be taxed in no less degree than the properties of other private corporations.

When a company comes to subject itself to such a comprehensive regulation as renders its property in effect a public instrumentality, then tax exemption begins to be in order. This course has indeed been followed in Cleveland, where as an incident to the passing of the properties under the Tayler plan of municipal regulation they came to be exempted in large measure from taxation. To the extent that it may become possible in any community under similar conditions to exempt street railway property from taxation, the rider's car fare will come more nearly to represent the actual cost of rendering the service of transportation—in itself a desirable result. But it would seem that the status of the company as a public agency should be well assured before such exemption should be attempted.

(i) *Automobile and jitney competition.*—For several years prior to the war, and to an increasing extent throughout the war period and up to the present time, the automobile has proven to be a serious competitor of the electric railways rendering local transportation service. Jitneys and automobile busses operating as common carriers have been able in some cases,

through the absence of sufficient public regulation, to engage in unfair and destructive competition with the electric railways for the most profitable part of urban passenger traffic. Strong as this competition has been, however, the electric railway industry as a whole has shown a very substantial increase in the riding habit. The operation of jitney busses as common carriers is much more restricted than the operation of private automobiles, but the jitneys have had a definite and intensive effect upon the street railway situation in particular communities, for the reason that they have engaged in direct and in some respects destructive competition with the street cars as public carriers. The experience of numerous communities, even before the extraordinary conditions growing out of the war, made it clear that unrestricted jitney operation, though more or less temporary and precarious in character, threatens the service, credit and solvency of the street railways.

(j) *Holding companies and banker control.*—About 75 per cent of the public utilities of the country are held, in whole or in part, by so-called "holding companies," which are responsible for their operation. This financing is done in large part through the securities of the parent company, which securities are supported by the securities of the various operating companies. This frequently gives an element of strength to the securities of the parent company which a single localized operating company could not in all cases present. If it were not for the supporting strength of these parent companies, many of the individual operating companies would have gone under before January 1, 1918.

Through these holding companies the electric railways threaten to become a banker-controlled industry. Those who have the ultimate say in matters of street railway policy from the point of view of investors have been dependent for their profits and their power upon the volume of securities outstanding and the frequency with which these securities have been exchanged or refunded. Holding companies in many instances have been responsible for over capitalization and have insisted upon drawing from the underlying companies every possible cent that could be secured in order to make a showing on these inflated securities. Hon. Joseph B. Eastman, at present a member of the Interstate Commerce Commission, discussed the question as follows:

"In the third place a factor of weakness, I think, was the control of the companies in many instances by holding companies organized in the form of voluntary associations, or, to use a more technical term, express trusts. Although the stock and bonds of the street railway companies themselves were issued under public supervision, these voluntary associations which corralled all their stock were subject to no regulation whatever and issued shares upon an inflated basis, and that had the result of accentuating the desire to draw every possible drop of income out of the underlying companies that could be secured in order to support earnings upon the inflated shares of these voluntary associations."

Through this system of financing and management the utilities have been largely controlled by persons living distant from the community affected by a particular electric railway, whose prime consideration has been to secure a return upon the property. This "absentee" management and control has not been successful in bringing about the proper spirit of co-operation between the local managers, employees, and the public. Since the electric railway companies come into immediate daily contact with large numbers of people, it is of the utmost importance that the industry should gain and hold the respect, confidence, and good will of its patrons. If the local public should invest its money in the stock and bonds of its local utilities there would be an improvement in the relations now existing between the corporation and the public.

(k) *Use of regulatory power to compel more and better service.*—Through the exercise of this power the companies have been required in many instances to improve their standards of service and equipment; to equip cars with vestibules for the protection of the motormen; and to give better heating, lighting and ventilation for the comfort and convenience of the passengers. They have also been obliged to install safety devices and make stops at frequent intervals. The exercise of the regulatory power of States and municipalities has undoubtedly added to the cost of the service.

(l) *Underlying companies and leased lines.*—Consolidations have been brought about through the unification of a number of separate corporations which owned and maintained lines of track within the same city. In many cases consolidations were made upon the condition that these companies should be guaranteed a certain rate of return or fixed sum, which represented a

high percentage yield upon the investment. The returns thus secured have been a frequent source of irritation, induced by a feeling that these underlying companies are being paid more than a reasonable return upon the value of their property. Your Commission believes that excessive payments to the underlying companies by the operating company have greatly diminished the net operating revenue, and that there can be no satisfactory solution of the street railway problem in such communities until the system has been valued as a whole, and the accounts so kept that the public may know that the rate of fare paid yields no more than fair return upon the value of such property.

(m) *Increasing demands of labor.*—The wages of street-railway labor prior to the war were generally insufficient from the viewpoint of a living wage, and the increases in wages that have taken place since the beginning of the war period have not on the average been as great as the increase in the cost of living.

At the time of our entry into the war, the average wages of motormen and conductors for companies of 100 miles and over were approximately 31.5 cents per hour. Since the war there has been a rapid increase in the wages of employees. The National War Labor Board by its awards in the year 1916 established the normal wages for this class of service in different cities, varying from 38 to 48 cents per hour, increasing wages 23½ per cent. The awards of the board mark the beginning of the rapidly increasing wages in this class of employment. An exhibit filed by the Amalgamated Association of Street and Electric Railway Employees of America shows the wages for conductors in the principal cities of the United States and Canada as of January 1, 1920. For convenience the exhibit is published as an exhibit attached to this report.

Since that date, new contracts have been agreed to which substantially increase the wages in a number of cities.

(n) *The war and the dollar.*—The conditions which have been here enumerated tended to break down the credit and stability of the electric railway industry. The increases in prices of labor and materials entering into the construction, maintenance, and operation of electric railways during the war period have corresponded with the increases in the prices of general commodities and in the wages of labor in all industries. Operating costs became so high that in many cases the revenues were not sufficient to pay even the current expenses of operation. Material and equipment prices reached abnormal heights. The increase over 1915 in railway motors and car equipment show 87 per cent.; locomotives, 87 per cent.; rotary converters, 75 per cent.; transformers, 70 per cent.; switchboards, 100 per cent.; motor generator sets 95 per cent.; turbines, 100 per cent.; pig iron, 106 per cent.; steel plates, 141 per cent.; copper, 58 per cent.; steel castings, 220 per cent.; coke, 35 per cent.; coal, approximately 100 per cent.; asbestos material, (which is largely used), 560 per cent.; other insulating materials, 125 per cent.; magnetic sheet steel, 280 per cent.; labor from 85 per cent. to 90 per cent.

(o) *Cost of new money.*—The destruction of capital incident to the World War and the unprecedented demand of the Government and industries for money, resulted in largely increasing the interest rate for loans. More attractive loans are now absorbing money available for investment, leaving the electric railways where, even with credit restored, they would have to compete in the money market with prosperous and unregulated enterprises.

These factors, and more particularly the increase in wages, fuel, material, and supplies, during and since the war period, have brought the electric railway industry to the point where in many instances it may be forced to abandon public service, and, in most cases, to a point where it will be unable to secure new capital to enable it to refund maturing obligations, secure new equipment, and to make necessary extensions and improvements unless some solution of the situation can be found.

Section IV

EMERGENCY RELIEF

The evidence in this case shows that the State regulating commission and in a large number of cases the local tribunals have recognized that it has been necessary to grant emergency relief to secure to the communities the service of the electric railways.

With commendable initiative and ofttimes against a hostile public sentiment, the regulating officers have granted temporary increases in the fares without undertaking to determine the

value of the plants or make a long and exhaustive investigation. Very little, if any, criticism was made to us against State regulating commissions for their treatment of these utilities during the war period. The most serious difficulties were met with in communities where the charge was fixed by franchises, and the State authorities were without jurisdiction to regulate fares. During a war or other abnormal periods it would seem to be the duty of the State and municipal officers to deal promptly with petitions for increased fares and to afford such relief as will enable the street railway to serve the public and maintain its track and equipment in proper operating condition. The public always pays for a run-down plant, either through inferior service or higher charges. The first essential is service to the public. Due recognition of this fact will secure to the investor a safe return upon his investment and to the public uninterrupted operation.

Section V.

CREDIT AND COOPERATION ARE THE COORDINATE NEEDS OF THE ELECTRIC RAILWAY

It is clear from this record that the two serious needs in the electric railway situation to-day are its need of credit and its need of co-operation between the public and the utility.

Credit will enable the electric railways to rehabilitate themselves, to adjust their capital accounts, and to meet the prices of normal replacements which are now upon higher price levels. The co-operation of labor will enable them to render continuous and popular service, to effect operating economies, and to get into their treasuries the full amount of revenue collected from the riding public. First-class credit and the full co-operation of their employees, if properly utilized in rendering adequate public service, would give the electric railways a well-nigh impregnable position in their relations to the public and tend to disarm and overcome the prevailing antagonism against them. With capital and labor performing their respective parts freely and well, restrictive regulation would be unpopular, and the demand for the substitution of public ownership and operaion for private management would shrink into relative insignificance. The test of private ownership and management lies in the solution of these two problems of credit and co-operation. These problems must be solved, and if no solution is practicable under present ownership and control, then the only course open is the complete transformation of the electric railway industry into a governmental business. Each member of this Commission believes that credit can be secured and private operation maintained under public supervision.

Unless the confidence of the investor in the securities of the companies furnishing this essential public service be restored the public itself must in some way assume the burden of supplying the funds necessary for their continuance. To a degree unknown to private business enterprises, which to a certain extent are able to finance capital expenditures from earnings, the electric railways are dependent upon new investment—new capital—for the extension, improvement, and betterment of the service which they perform. Communities need and are constantly demanding additional local transportation facilities. They require large sums of money, which can only come from those with savings to invest. When the flow of new capital ceases, when the confidence of the investor in the ability of the enterprise to safeguard the integrity of the investment and to insure a fair return thereon ceases, new capital is unobtainable and the utility can no longer serve the purpose for which it was created.

This condition is now present. Lack of confidence in electric railway investment exists to-day to a degree which has caused a partial paralysis, is working havoc with the finances of the companies, and is depriving the public of the service to an alarming extent.

For rehabilitation and improvements and extensions which are vitally needed to meet the requirements of every growing community new capital at once and in large amounts is imperatively required, and until the force of circumstances convinces those with capital at their disposal that investment in electric railway securities affords safety and a fair return it cannot be obtained.

So far as the requirements in normal times are concerned, certain characteristics of the electric railways and certain conditions under which they operate tend to make their credit almost unlimited. In the first place, they have enjoyed a monopoly of the most convenient form of local transportation during a period of rapid industrial development and of rapid increase in

urban population. They have a continuous and immediate market for their "goods." They sell transportation as it is produced. While electric railway traffic fluctuates somewhat from year to year, according to the number of passengers and the prosperity that prevails, and fluctuates somewhat from season to season, from week to week, and from day to day, these fluctuations are relatively unimportant. The business of transportation goes on every day in the year. Under normal conditions the credit of the electric-railway business is its relatively small need for "fluid" or working capital. In this respect it occupies a position more independent than that of any other utility or any other private industry. It does a cash business. Almost 100 per cent. of its revenues are collected in advance, through the sale of tickets or at the time the service is rendered, from the collection of fares in the cars. Money flows into its coffers day by day in a relatively even stream. Before it pays the wages of its employees, the salaries of its officers, the claims resulting from injuries and damages, the rentals for the use of property, the interest and dividends on its investment, or its taxes, it has already collected from its patrons in cash full compensation for the service rendered. It does not send out bills.

The increase in revenues of the electric railways is a product of three lines of expansion. These are the increase in urban population, the increase in the riding habit, and the increase in the rate of fare. The gross operating revenues of the electric railways grew from $247,000,000 in 1902 into $630,000,000 in 1917—an increase of 163 per cent. For a number of years, particularly during the first decade of the century, there was a strong tendency toward fare reductions in many urban communities, but the evidence shows that for the country at large the total amount of electric railway operating revenues increased by a much greater per cent. than the number of revenue passengers during the 15 years ended with 1917. Since the latter date there has been a strong upward tendency in street railway fares. Statistics covering 75 per cent. of the electric railway traffic of the country indicate an increase of nearly 14 per cent. in the average fare paid from 1917 to 1919, and an increase of about 22 per cent. in passenger earnings during this two-year period.

Without a doubt the enjoyment by the electric-railway industry of a steady inflow of revenue of rapidly increasing volume, assured by the most fundamental conditions of modern life and the strongly developed habits of the people, is extremely favorable to credit. In what other industry could investment be made with greater assurance of security and continued earning power? The tracks for the most part are in the public streets where everybody can see them. The operation of the cars is most conspicuous. It would be hard to find another industry where the investment is completely visible to all and so freely observed by the entire population. If publicity of operation is a guaranty against the waste and disappearance of capital, then the position of the electric railway, where everybody can observe it every day, is surely conducive to the development and retention of credit. From this viewpoint how different is a street-railway investment from an investment in mining stock or in the fruit lands of the far West, or even in manufacturing enterprises in one's home city? The capital stock of electric railways does not require to be refunded, and under sound financial and regulating policies the proportion of stocks to bonds outstanding would undoubtedly be much greater than is shown to have been the case. Under such conditions refunding difficulties would be about negligible.

The record is not clear as to the amount of new money which may be required year by year, but a very conservative estimate places the figures at between $175,000,000 and $200,000,000 per annum, to be used in replacements, refunding obligations, extensions, and improvements.

For the purpose of restoring credit, it seems to be the general impression of all witnesses that the first necessity is for the industry to put into effect such economies of operation as will enable it to give good service at the lowest cost. Generally speaking, this can be done by the elimination of deadheads and other free service, the abandonment of nonprofitable lines, and, where practicable, the substitution of one-man cars for heavier equipment, the modification of special taxes or provisions for paving, snow removal, street closing, tolls, contributions toward the cost of public highways, bridges, etc., reduction of such rentals and power rates as may on investigation prove excessive, the co-operation with the public in developing faster schedules and installing skip stops at convenient places, rerouting of cars, the use of trailer cars, keeping street car tracks clear of traffic and other congestion, due to parking of motor cars on curbs, and the regulation of vehicular traffic. Much can also be done toward reduction in the cost of operation

by developing the proper spirit of co-operation with employees. All of the matters herein suggested properly come under the head of good management and regulation and in some cases would entail legislation, but in our judgment they do not wholly solve the street car problem, or invite needed capital into the industry. During the past two years efforts have been made to meet the difficulty by increasing fares. In many cases this has helped to tide them over a difficult period, but it has not stimulated the confidence of the investor in the integrity of the industry. New capital is not flowing in that direction.

An effort has also been made in a number of communities to increase the short-haul riding habit as well as the revenues by the introduction of the zone system for fares. This system has proven generally sucessful in some of the European countries, but it has met with varying success in the United States. Fundamentally the theory of the zone system is logical. It is that a passenger pays for what he gets. Under the present flat fare charge, the short-haul rider is paying for a service given to the long-haul rider.

The original failure of the electric railways to vary their rates of fare for transportation service, based upon the length of the ride, as services in all other lines of business are sold, is, in our judgment, one of the contributing factors to their present financial condition. The electric-railway industry is the only public utility which, as an industry, has consistently adhered to a flat basis. Steam and suburban roads charge on a distance basis. Gas, power, electric, and water power companies, generally, make their rates upon a measured basis, subject to a minimum charge per month and the telephone company grade all toll messages on a mileage basis, while observing in most cases a flat rate per month for local service. Whether or not under present conditions it would be to the interest of a community to introduce a zone system of fares, instead of the present flat fare system, is a question which we think should be decided by the community itself, having reference to the social problems involved.

Section VI.

LABOR ON STREET RAILWAYS

The labor policies of the electric street railways will in the future be of great importance as an element in the restoration and the permanent maintenance of their credit. The full co-operation of labor is essential to the highest prosperity and usefulness of the industry. This is particularly true because in case of the street railways the employees who immediately handle the service come into direct contact with the people who consume that service.

The evidence before this Commission shows that in the past the suspension of service, due either to strikes or lockouts, has been costly to both the employees and to the operating company, but the loss occasioned to those two groups has been secondary to the damage wrought to the public interest. The conditions which recurrently bring about such interruptions of service should be treated at their roots. The employees engaged in this occupation should have a living wage and humane hours of labor and working conditions. They should have the right to deal collectively with their employers through committees or representatives of their own selection. In all contracts and working agreements made between them and the employing companies there should be arbitration provisions under which all labor disputes which cannot be voluntarily settled shall be submitted to boards of arbitration composed of disinterested persons. The award of such a board of arbitration should be final and binding upon both parties to the controversy; for it is intolerable that the transportation service of a city should be subject to occasional paralysis, whether by strikes or by lockouts. It would seem that public authorities could well interest themselves in the formulation of such plans and rules for the arbitration of labor disputes under these contracts as will secure justice to both parties and as will assure continuity of service in so far as that may be possible of achievement.

But the full co-operation of labor in the street-railway industry will not have been brought about alone by the recognition of the right of collective bargaining which we have just been urging. Such recognition is but a foundation for full co-operation. The actual work of insuring it must come from the employees themselves to whom the right of collective bargaining is thus given. For that right carries with it a duty. It would seem to be the duty of the organization which bargains for the individual worker to interest it-

self actively and unremittingly in his delivering to the company his best strength and intelligence.

This Commission thinks that where the street-railway worker has the right of collective bargaining the public has the right to expect that the organization or association representing him will not only procure his wage, but will also continuously stimulate his whole-hearted constructive co-operation with the company and his effective service to the public.

Section VII

VALUATION.

It is the law that utilities are entitled to a fair return upon the value of their property used in public service at the time of the inquiry. The methods for finding fair value are in dispute. No permanent solution of the electric railway question can be found in the absence of a finding of value for rate-making purposes. This applies to commission form of regulation, cost-of-service contracts, or public ownership and operation. The public should know what it is paying for, and this question cannot be settled without knowing what the property is worth.

Although some evidence was introduced before this Commission on the subject of valuation, the Commission discouraged the introduction of testimony upon this question mainly because such testimony, no matter over how many weeks or months it might be extended, would have been but a fragmentary duplication of material already available in the official records of the Interstate Commerce Commission. Pursuant to an amendment of the Act to Regulate Commerce, approved March 1, 1913, which amendment is known as the Valuation Act, the Interstate Commerce Commission has during the past seven years been engaged in valuing the steam rail, roads, telegraph, and long-distance telephone companies in the United States. In connection with this work it has carried on a most extensive investigation into the subject of valuation for rate-making purposes, in the course of which investigation the carriers have been represented by a conference committee of 50, asssisted by able lawyers, accountants, and engineers, while the public has been represented by th State public utility commissioners, their counsel, and by the General Counsel of the Interstate Commerce Commission. Every theory and principle of valuation has been fully and ably discussed, argued, and briefed.

On July 31, 1918, the Interstate Commerce Commission submitted its report in Valuation Docket No. 2, Texas Midland Railway. This report contains a full discussion of the different theories of valuation considered, the method employed by the Commission in assembling all the essential data, and discussion of the requirements of the Valuation Act, and the findings of the Commission upon most of the disputed questions. Subsequent decisions were made in the case of the Winston-Salem Suthbound, Alabama, Birmingham & Atlantic, and Kansas City Southern Railroads. We are informed that decisions affecting many of the other railroads will be made during the present year.

The first requirement of the Valuation Act is for finding of original cost. The Commission is reporting original cost as fully as it possibly can be obtained from the best available evidence in each particular case. In its valuation proceedings it has been earnstly contended that the cost of reproduction new as of the date of inquiry should be taken to be the value of the property. Others have contended with equal earnestness that the value of the property should be limited to the original cost, as this item represents the money which has been actually invested by the stockholders and bondholders in the property. The rapid increase in the cost of labor, supplies, and material during and subsequent to the war period seems to have served as a peculiarly vivid indication that the original cost is a primary factor in finding value for rate-making purposes.

In our opinion, the decisions of the Interstate Commerce Commission, based upon long experience and investigation, will in large measure settle the standards of valuation. For this reason we suggest that municipalities and States which may be engaged, by arbitration or otherwise, in fixing the values of electric railways, should familiarize themselves with the practice, experience, and decisions of the Interstate Commerce Commission in these valuation cases.

The valuation, when once fixed as the basis for the financial return of the company, should logically come to affect the amount of capitalization. No matter what may be the plan of operation or of public regulation under which the company is working, if its financial credit

is to be strengthened through just and stable arrangements with a friendly public, it should, in the judgment of this Commission, voluntarily reduce any excessive capitalization to conform to such valuation as may have been determined upon.

Section VIII.

PRESERVATION OF RECORDS

We would particularly urge public officials and officers of the electric railways to cooperate seriously in the protection and preservation of all corporate, financial, and cost records.

Service-at-cost plans have been recently rejected by popular vote, largely on the issue of valuation, in Chicago, Denver, and Minneapolis. The public, justly or unjustly, has become so suspicious of the electric-railway companies that it may be expected to reject any service-at-cost or public ownership question submitted to popular vote, no matter how fairly the plan may be formulated, if it is not thoroughly convinced that the capital item has been fairly and honestly arrived at. The failure of a company to preserve its record may in the end hurt its stockholders more than it may the public.

Section IX.

AUTOMOBILE, JITNEY, AND MOTOR BUS

The automobile and jitney bus are facts. Jitney competition began about 1912, and was at first entirely unregulated. Even to-day in some places it continues without regulation of any kind, and in many places with only partial and inefficient regulation. In no instance, so far as this record shows, has this so-called jitney carriage of passengers been subjected to obligations as to the payment of taxes, maintenance of highways, character and extent of service, and financial responsibility for accidents under which the electric railway business is being conducted. The portion of the street paved and maintained by the electric railway, and in winter cleared of snow at its own expense, is taken advantage of by the jitney competitor without compensation either to the company or to the municipality, and often to the serious injury of the street railway by interfering with the prompt and regular movements of its cars. The jitneys prefer to confine themselves almost exclusively to the short-haul traffic. It appears that in the city of Bridgeport the jitneys carry about 50 per cent. of the passengers riding within 1¼ miles of the center of the city; almost 69 per cent. of the passengers riding between 1¼ and 2 miles from the center; a fraction less than 45 per cent. of those riding between 2 and 2¾ miles from the center; and none riding more than 2¾ miles from the center of the city.

The question from the point of view of the street-railway service is, What, if anything, is to be done about them? The public, through its governmental agencies, would not concern itself with the effects of this competition if it were not that local transportation is recognized to be an essential public service. So far as private automobiles are concerned, although they undoubtedly have their effect upon the extent to which people make use of the street cars, they are even now less important than human legs as competitors of the electric railways, and it is not deemed to be consonant with the theory of American institutions and government that the free movement of private citizens by their own means of locomotion should be restricted in order to compel them to make use of public vehicles, whether the latter be operated by private agencies or directly by the Government. All that could be properly done in this direction would be to compel the private vehicle using the public highways to pay license fees or taxes proportionate to the burdens they place upon the highways, as compared with the burden placed upon the highways by the street cars.

While there is some diversity of opinion as to the permanency of the electric railway industry, in view of the improvements which are being made in the use of gasoline and electric power machines, the opinion appears to be nearly unanimous that the electric railway operating on tracks is the most efficient means of furnishing local transportation service in the urban centers. The future of the gasoline public conveyance in urban transportation is entirely unreckonable. Great strides have been made and greater strides will doubtless yet be made in its use. Local public authority would indeed be exercising a dangerous power in unduly res-

tricting the use of new inventions for public transportation at a time when in nearly every large city the physical task, even for an electric railway well equipped, of carrying the public in decent comfort is becoming so formidable. If jitneys and automobile busses acting as common carriers were subject to regulation by State commissions and were required to procure a certificate of public convenience and necessity before establishing a route or undertaking to render public service, the motor vehicles would be prevented from entering into active competition with street car service unless the latter is shown to be wholly inadequate.

That street-railway service and jitney service cannot permanently exist and pay their own way in competition with each other under any ordinary urban conditions seems to be well established by experience and by the conditions inherent in local transportation service, but the belief is general that the motor bus may properly be used to supplement the service rendered by the street cars. The motor bus may be used to render a sort of supplementary service, such as the service now rendered on Fifth Avenue and certain other high-grade residential streets in New York City by the Fifth Avenue Coach Co., or the busses may be operated on other independent routes merely as feeders to the street railway system to take care of traffic in partially developed territory in advance of the time when street railway tracks can be laid with reasonable assurance that the investment will be self-sustaining.

Undoubtedly, the whole matter of the control or abolishment of jitney competition may be summed up in a few words. All transportation service is for the public. Jitneys and automobile busses cannot be repressed merely for the sake of compelling people to ride on the street cars, particularly if the car fares are higher than the jitney fares and the car service is less convenient than the jitney service. However, it is clearly in the public interest that all common carriers engaged in local transportation service should be required to render adequate and safe service, and that local transportation facilities should be developed in the most economical and effective way from the point of view of the community. Unnecessary and destructive competition ought not to be permitted, and the community at large should conserve the established facility that still is and promises to continue for an indefinite period the principal means of local transportation. The problem in a considerable measure is a local one, but in every case it should be solved with intelligent regard to the permanent interests and obligations of the community. If the street railways are to be allowed the benefits of even a qualified monopoly, they should be required to fulfil their obligations. They must render service that is adequate and convenient at rates that are attractive. The community can afford to go a long way to preserve street-railway service, and the efficient regulation of jitney and motor bus competition will aid considerably in restoring the confidence of investors in the future of the electric-railway industry and in increasing their gross and net revenues.

Section X

DEPRECIATION.

The electric railways should adopt the policy of setting aside a depreciation fund with which to take care of replacements and thus preserve the integrity of their investment. It would have a very wholesome effect upon credit. Such has not been the practice in the past. Deferred maintenance has accumulated to an alarming extent during the war period.

Generally speaking, regulating commissions have the power to prescribe methods of accounting and to establish the amount of the depreciation fund. This practice should be observed, and its adoption will improve the situation of the industry and be greatly in the interest of the public welfare.

Section XI.

EXTENSIONS SHOULD BE PAID FOR BY ASSESSMENTS ON OUTLYING PROPERTY BENEFITED.

Your Commission would urge that in every community, where and to such extent as may be practicable, consideration be given to the advisability of requiring extensions and rapid transit systems of subway and elevated to be paid for, not out of new capital invested through the medium of bonds or stock, which means for all time an added burden upon the car rider, but

from special taxes assessed against the owners of property in the district the value of which is enhanced by such extensions.

This would not be a new principle; it would be merely the application of an old principle. The American property owner has been accustomed to contributing out of the increase in value of his property to the cost of building streets and other public improvements. The principle is peculiarly applicable to improvements of city transportation systems because of the enormous increases in real estate values created when new extensions open up new territory or when the creation of rapid-transit facilities make outlying territory more available.

The City Club of New York, in 1908, a few years after the extension of the New York subway from One hundred and thirty-fifth to Two hundred and thirtieth streets, in Manhattan, had been built at a cost of $7,375,000, made an authoritative study of new real estate values created by that extension in the district lying between One hundred and thirty-fifth and Two hundred and thirtieth streets. After deducting $20,000,000 as a liberal estimate, based upon studies of parallel situations, of the natural increase in property values in that district which would have taken place without the subway extension, it was found that the increase in values clearly brought about by the subway extensions was $49,200,000, an amount upward of seven times the cost of the improvements. The property in the district enjoyed an increase in value of 104 per cent. If, by assessment, it had borne the entire cost of the extension in the district, it would have still retained a new profit on the value of the land of 89 per cent., or an aggregate of $41,825,000 for the district. The Manhattan extension just referred to, together with The Bronx extension beyond One hundred and thirty-fifth Street, cost $13,075,000. These two extensions directly created, in a limited area lying near those extensions, new land values solely due to the extensions of $80,500,000. Let it be borne in mind that the cost of the entire subway system from the Battery to Two hundred and thirtieth Street in Manhattan and to Bronx Park was about $43,000,000.

In Philadelphia recent estimates of improvements in land values expected from rapid-transit projects in contemplation have been equally enlightening. Similar results would be certainly obtained in many other cities by studies similar to that made by the City Club of New York.

Is it not in accordance with laws of economic justice, then, that the landowner, as such, should share his benefit of increased land value with the public. Instead of the cost, $7,375,000, of the Manhattan extension being borne by the owners of the land in the newly served territory, it was capitalized and translated into an annual charge of $350,000 or more, a burden which had to be borne out of the car fares and which to-day helps to intensify the financial predicament in which the company finds itself. If the public pays out of its fares for the cost of maintaining and operating the line which will bring the outlying landowners such enrichment, should the latter not share with the public out of that enrichment, depending upon the degree in which he is benefited, by paying for or by helping to pay for the initial cost of construction of the line? That such a solution is just is rather significantly shown by the fact that in a number of cities landowners in outlying districts have offered spontaneously to contribute large sums to the company to assist it in constructing certain extensions. The present predicament of the street-railway companies is in many places partly due to overbuilding, a fault traceable to political or business pressures exerted by speculators in suburban lands who had little or no financial responsibility in connection with the street-railway extensions which they caused to be built for their immediate benefit. This action of the suburban land-owners of certain cities, on the other hand, is a significant expression of enlightened self-interest and a sound, constructive recognition of a fundamental principle of justice. The establishment of that principle by law, whether by changes in city ordinances, State statutes, or State constitutions, should, in our opinion, not be delayed. This thought is especially recommended to the attention of a number of communities which are now facing the necessity of extensions or rapid-transit improvements.

Three points in this connection should be briefly touched upon:

First. The amount of the assessment on any owner would probably have to become fixed by an appraisal sometime after the construction of the improvement, and the owner should be given the option of paying his assessment in installments over a course of years. Consequently the actual first financing of the extension might have to be by the city.

Second. It will doubtless be urged by some that such a system for building extensions would lead to municipal ownership. On the contrary, it seems to us that if properly administered it could, by reducing the acuteness of the fare question, serve with much force to offset the pressure for municipal ownership.

Third. As to the problems incident to allowing a private company, for a nominal rent and in return for undertakings as to repair and maintenance, to take over or use public property, similar problems incident to similar arrangements have already been ably and effectively handled in Boston and a number of other cities under State or municipal regulation in connection with subways and other structures.

If objection to the employment of such principle in constructing extensions be made upon the ground that public officers and land-owners along the line of the proposed extension are thus given the power to veto such extension, let it be remembered that the problem of extensions is not only a serious financial problem, but is also essentially and finally a long-range social problem. The development of city's street railways should be guided primarily not by the fortuitous financial expediencies of a small group of bankers or real estate operators. It should be guided by the foresight and vision of those who are officially responsible for planning the city's growth and life, in terms of its water supply, its light, its streets, its sewers, its schools, its parks, its playgrounds, its civic centers, its night amusements, its community life, its libraries, its hospitals. It should be guided by those whose public duty it is to be interested in the health and happiness of the average city toiler and his family of growing children.

The call for municipal ownership to-day does not all emanate from dissatisfaction with the service in a narrow sense as riding facilities.It is largely an expression of feeling on the part of many that the street railway instead of helping to make conditions bearable, is contributing to making them unbearable; that it is not, with the functions and powers which it exercises, accomplishing what it might accomplish to reduce the abnormalities of city life. While areas within the city remain undeveloped and unserved by adequate transportation, toiling thousands find themselves dragged out miles farther, not to green lawns and spaces, but to a repetition of the same ugly congestion that they know in the city. The time will come when employers and educators will be forced to take cognizance of the impairment in working efficiency caused by such inconveniences as are suffered by the traveling public to-day. The time is approaching when cities will find it necessary to extend their street railways not on the basis of new property values or the earnings of any single line of rails, but on the basis, primarily, of what will be most consistent with the public health and public economy.

These motives are strongly at work underneath our situation to-day. The public's control over stock issues, service, routes, extensions, etc., is needed to-day not only in order that as part of a plan for restoring the credit of the street railways the community's interest may be protected by the guarantee of efficient management, but also because the city of to-day is taking a more conscious, constructive interest in the city of to-morrow. That interest can be recognized and cared for under private operation if the public authorities have the suggested controls. If such controls do not come into effective existence, then one of the strongest forces making for municipal ownership will continue to exert an increasing influence.

Your Commission trusts that this principle of paying wholly or in part for the construction of extensions out of special taxation of benefited property will be seriously studied and adopted where possible. It seems fundamentally sound. While its adoption presents legal difficulties, as has the adoption of many another newly recognized industrial-economic relation, it holds great promise for reducing the financial problems incident to public transportation.

Section XII.

RATE OF RETURN.

It is an axiom that property devoted to the public use should secure a fair rate of return. Where money is represented by bonds the return is a part of the contract and is not changed during the life of the contract. Where capital is represented by stock, the rate of return may vary according to the operating or financial conditions, and naturally it should compare favorably with the income upon other classes of investment. The undisputed testimony proves that the rate must be certain as well as reasonable to attract capital and that the absence of either of

these essentials will frighten the investor away. It may be a lamentable fact, but it is nevertheless true, that most of the electric railways are obliged to go to markets outside of their territory to secure new capital; and under existing circumstances the investor is no longer willing to place his money in speculative properties. The experience during the war period has taught investors that a fixed franchise fare fails to meet the requirements of the industry and there is no dissent from the suggestion that such fixed fare is a relic of a bygone age. There are certain conspicuous examples of an adherence to a contract fare which may be referred to, but they do not affect our conclusion that the rate of fare must be subject to prompt revision according to the needs of the particular property.

Section XIII.

REGULATION OF PUBLIC UTILITIES

The foundation stone of the relations between communities and the companies must be the local authority under which they are permitted to conduct business. Since practically in all States the local government alone has the power to permit the use of highways by electric railways, the primary authority is the franchise grant or agreement containing the permit. Franchises are of varying terms and conditions. Until recently the franchises were generally limited to a certain number of years, but now it seems to be the settled conviction that such contracts are inherently imperfect. A reserve fund set aside during the term to take care of the property at the expiration of the franchise would result in increased charges for services; and, upon the other hand, the failure to take care of the investment in this way leaves the company at the will and caprice of the public. Instances have been referred to in this record where the railways are having difficulty in securing new franchises, while in some communities there seems to be a disposition to take over the property for junk values. Under these conditions it is natural for the company to neglect maintenance and give poor service. From the evidence it appears that there will be difficulty hereafter in securing new capital for properties that are governed by such franchises.

The undisputed testimony favors an indeterminate franchise by which the company is permitted to operate subject to the right of the public to take over the property by paying its value or agreed price. Such contracts protect both the investment against confiscation and the public against extortion by providing for payment of just compensation for the use of the property. The indeterminate franchise has been most thoroughly developed in the State of Wisconsin, and it has been recognized in the District of Columbia, and the States of Indiana and Massachusetts. Its earlier adoption by other States and communities would have prevented many conflicts and misunderstandings. We believe that this form of franchise should receive the favorable consideration of the public.

Prior to 1907 the regulation of electric railways was principally confined to the municipalities. The history of this industry is replete with examples where municipal corruption has resulted from this control. The street railway is, however, essentially a local institution and it cannot permanently prosper unless it has the confidence and co-operation of the public which it serves.

Since 1907 many States have taken over the control and regulation of this service and the communities within those States have been deprived of all jurisdiction. While the evidence shows that exclusive State control is preferable to exclusive municipal control, yet there appears to be a happy middle ground by which the municipalities may exercise control of the things that are peculiarly within their province, and the State retain jurisdiction over all other matters and also exercise supervision over the action of the local tribunals. No general rule would fit all cases.

We have street railways which do not extend beyond the limits of a city, others where two or more systems operate in the same city, while frequently a single company operates in, through, and between a large number of cities and villages. In New Jersey one system serves practically the whole State, and the same condition exists in Connecticut. Manifestly no rule of thumb can apply to these different conditions. The tendency is to extend the mileage and service of street railways and to unite different companies under one management, and as our cities and villages grow and the rural country becomes more populous and prosperous these electric railways will extend their lines to meet the growing demands. Under such conditions safety, efficiency, and economy will be promoted by extending to a superior regulatory board the control of the prac-

tices, rules, regulations, security issues, the system of accounts, and the charges to be paid for the service.

Effective local control is well-nigh impossible where a single company spreads out over an entire section of the State and this condition even constitutes a serious obstacle to municipal ownership. Where the street railway company operates wholly within one city there can be no insuperable objection to exclusive municipal control, when the people are ready and willing to exercise it. Secretary Baker testified upon this point as follows:

"Because I think the responsibility for the management of its own affairs is the greatest educational influence that the city of Cleveland has. The fact that the people of the city had studied and grasped and solved an intricate and complicated problem like the street-railway problem has made them a more self-conscious and a stronger, more virile people than they were before that problem was put up to them; and I should be very sorry indeed to see the responsibility for their own affairs in as intimate and important matter as street-railway service taken away and transferred to a State agency."

Cleveland has made a more extensive study of the electric railway problem than any other city in the country. Intelligent regulation cannot be secured without the assistance of expert operative, statistical, and engineering departments, and these are expensive items in any municipal budget.

In some respects uniformity is not only desirable but essential. This applies to the control of security issues, to accounting, the study and determination of depreciation and the control of such funds, fixing reasonable maintenance standards and their enforcement, and the methods and principles to be employed in valuing properties, either for rate making, capitalization, condemnation, or purchase. In a general way, the rules and principles which may be applied to the electric railway industry will be found available for other utilities, such as telephone, electric light, heating, power, and gas and water companies. In our judgment the State public service commissions should determine finally these matters, subject, of course, to an appeal to the courts where they err in judgment or transgress the law. Regulation by municipalities should be subject to an appeal to the State public service commission, thus bringing to bear upon the question involved the judgment of a body of men somewhat aloof from local influences. This would place the final authority in the State, and surely the communities, which are but subdivisions of the State, should prefer to submit their cause to a State tribunal in preference to a court, which rarely, if ever, has any regulating experience.

Theoretically, State control is removed from the influence of community prejudices. It certainly exercises its functions with a more judicial attitude, and with greater equity to both the communities and the companies; probably it is in most instances more economical and more efficient, since the State can create a better and more comprehensive organization for regulation at less cost. State control obviates conflict of authority between communities that is bound to obtain when utilities operate beyond the limits of a single municipality. It makes unnecessary the erection of metropolitan or public utility districts in order to secure uniform regulation, and it also results in a large saving to single communities which would otherwise be obliged to maintain its expert departments to perform this service.

The possibility of combining the best features of State and local regulation through a division of powers and duties was suggested by several witnesses and has been carefully considered by this Commission. It would seem to be desirable to leave to the communities, at least in the first instance, the determination of such questions as the assignments of streets upon which the railways may operate, questions involving speed, stops, schedules, rerouting of cars, and service during peak hours and otherwise, the extension of tracks, rate of fare, and the securing of certain statistical information where such information does not directly interfere with the accounting rules which have been prescribed by the State. Under these conditions the cities would be compelled to take a direct interest in the transportation business, leading to a more wholesome co-operation between the public and the railways. We believe this principle is worth trying, because it places the initial regulating responsibility upon the community, thus leaving the way open for sympathetic understanding and co-operation between the public and the industry, without which the industry cannot survive, and yet places the final responsibility upon the State,

which is best equipped to determine the questions involved in a sane, consistent, and impartial manner.

In a number of States commissions now have complete authority over all questions. There should be no change if the people are satisfied with that policy. It has unquestionably worked well in most of these States. We do, however, desire to emphasize our belief that any form of regulation will fail of its purpose if it does not secure public co-operation in the conduct of the utility. Our study of conditions as they exist in the principal cities of the country has shown that unless the public is in sympathy with the purposes of the management and lends assistance in their achievement, neither efficient nor economical service is possible. Co-operation cannot be obtained unless the public be informed as to all phases of the electric railway problem—financial, economical, and operating—and will not be continued unless the process and information is continued. This psychological factor involves a continuing task of undoubted magnitude, but whatever the regulatory authority may be, and however great the difficulties, the duty involved must be performed if the relations of the public and these highly essential utilities are to be maintained upon a basis that will insure proper service.

The electric railway problems admit of a satisfactory solution once the elements that compose them are made known and the process of ordinary economic and business common sense are applied. The duty of both the public authorities and those who control the electric railway enterprises of the country is plainly indicated. The time has come for a permanent and satisfactory settlement of the traction question. The interests of both the public and the companies lie so exactly parallel in almost every respect that there ought not to be any serious difficulty in arriving at a solution if both parties approach the subject in a proper spirit.

Section XIV

SERVICE-AT-COST PLANS

The electric railways have responded to the improvements in the arts and sciences, and it may also be said that the science of regulation has fairly kept pace with the requirements of public service and the growth of the industry. Franchises have been the result of experiment. The contract fare established an unsound rate basis, and in some instances commissions were slow to reach conclusions in rate cases. Investors lost confidence in the electric-railway business. It was thought that a contract must be evolved which would meet all the requirements of the industry as well as of the public. Thus came the cost-of-service contract. It has worked well in Cleveland during the most difficult period in the history of the industry. It seems to have worked fairly well in the other cities where it has been tried out, and to justify the following statement made by Secretary Baker:

"I believe that any community in America will pay cheerfully and willingly whatever rate of fare is necessary to carry the people on their street railroads, and to maintain good service in their communities, if they are sure that they are paying only proper operating expenses, proper maintenance, and a proper return on capital."

Practically all of the witnesses for the electric-railway industry favored service-at-cost franchises. That service should be provided at cost is not a new principle in the regulation of public utilities. It is back of all public service commission regulation, and expresses the reaction from the original contractual relations between utilities and communities under which fares were fixed and limited, while return was not. The application of the term "service at cost" in recent working argeements between the electric railways and the cities of Cleveland, Cincinnati, Dallas, Montreal, and to a limited extent the city of Boston, does not clearly describe such agreements. They are, in effect, devices for automatically and quickly adjusting price to cost. It is, therefore, not so much the principle back of such plans as it is the method provided for carrying that principle out that concerns the Commission in this phase of the traction problem. Without going into unnecessary detail, it will suffice to state that the main features of the contract are:

(a) Fair valuation of the property.
(b) Capitalization to conform thereto.
(c) Agreed return upon capital.
(d) Public control of capital issues, and, to a certain extent, over expenditures.
(e) Public supervision over management, operation, and service.

(f) Automatic changes of rates, to meet fluctuating economic conditions, and to insure a proper return on the value.

(g) Private operation, subject to the right of the municipality to purchase the property at its value, or upon an agreed price.

(h) Reduction of taxes and assessments.

The service-at-cost contract is still in its experimental stage, and naturally a number of criticisms have been made of it. These have been considered, but with the limited experience under this contract we believe that the criticisms are more theoretical than real. If these defects prove to be substantial and result in unduly increasing the cost of service, they can be removed by improved regulation, but if they cannot finally be avoided, then it would seem that the public has ample protection in the contract's purchase provisions.

Generally speaking, the main criticism of this form of contract is that it tends toward inefficiency and uneconomic operation; that it contains no provision for the control of strikes, or uninterrupted service; and that labor and management may co-operatively increase the cost of operation to the point where the public may be unduly burdened.

From the point of view of credit restoration, the outstanding advantage of this contract is that rates are automatically adjusted to meet changing operating conditions. We are inclined to think that the assurance of an automatic adjustment of fare will do more than anything else to restore the confidence of the investor in these properties. Public confidence will be immeasurably strengthened through the valuation of the properties, because the figure that is established constitutes the basis of the return to the investor, and fixes at least the minimum price which the public will be obliged to pay if, at some future time, it should decide to purchase and operate the property. When the value is thus fixed, there can be no further dispute as to capitalization or excessive profits, because the people will know just what they are paying for. The controlling element in its favor is the restoration of public confidence in the corporation, due to the removal of those elements of friction which have so frequently engaged the attention of the public. It might also be said that to a certain extent it removes the railways from the idea of speculative gain, and places them upon a common-sense business basis where the people pay for the service they get, and where the opportunity for large profits no longer exists, since economies and lower operating costs are reflected in reduced charges for service. When the contract is once established, the opportunity for municipal corruption is reduced to the minimum.

We strongly recommend the principles of the service-at-cost contract, not as the only solution, but as one means of solving a very difficult problem.

In cases where the electric railways operate in more than one municipality and between different municipalities, such service-at-cost contracts can properly, in our judgment, be made only with the public-service commission, and in such cases the provisions of the contract should apply in any particular community to the system as a whole rather than to its individual parts.

Section XV.

PUBLIC OWNERSHIP AND OPERATION.

It is urged by many that public regulation of the street railways has failed, and that the properties should be taken over by the municipalities or the State. Dr. Delos F. Wilcox concluded his able and interesting analysis of the testimony given in this connection with that suggestion. Some members of the Commission individually feel that eventually municipal ownership might prove generally desirable and that there may, perhaps, be communities in the United States in which on account of the responsibility of the local government and the acuteness of the present conditions, municipal ownership should be resorted to. The experience of Boston, San Francisco, and Seattle are being watched with great interest, but they have not continued long enough to justify any conclusion as to the relative merits of public as against private operation. The Commission is unanimous on this point: That there has not been sufficient experience with public ownership and operation of street railways in this country to enable us to recommend it as a permanent solution of this problem. In some of the foreign countries it has apparently worked well. We do not believe under present conditions that this method of operation would be successful in most of the cities of the United States to-day.

Aside from the serious question whether municipalities as at present organized can oper-

ate electric railways as efficiently and satisfactorily as private enterprises, our conviction upon this subject is based upon the great political difficulties which would have to be overcome, such constitutional amendment, legislation, and the fiscal burdens incident to the purchase by cities of great public utilities, and upon the further fact that in many sections of the country the lines of the railway extend through many cities and villages and into rural territory. It is assumed, however, that these latter difficulties could be mastered by a community thoroughly awakened to the necessity for such a change.

We are certain that much can be accomplished by private initiative, stimulated and aided by thorough public regulation; that the final solution could, in many communities, be found under private management, and that in any event, the reforms which have been urged by the Commission should be instituted, since those reforms would serve to place the relations between the street railway and the public upon a more just and equitable basis.

Conclusion.

We have conceived the scope of this inquiry to be to ascertain, first, the actual financial and service conditions of the electric railways of the United States at the present time; second, the causes which have contributed to such conditions; third, what readjustments of the relations between the electric railways and the communities which they serve must be brought about in order to restore the confidence of the public and to put the companies upon such a financial basis for the future as will enable them to render continuous and efficient service to their respective communities.

We have not entered into a minute discussion of the different franchise provisions throughout the country, nor have we undertaken to suggest any details which should be incorporated into any new contract, but have preferred to confine ourselves to suggesting the broad outlines of such new relations.

The Commission is not pessimistic as to the future. The electric-railway problem admits of a satisfactory solution, once the elements that compose it are made known and the principles of ordinary economic and business common sense are applied.

The duty both of the public authorities and of those who control the electric-railway enterprises of the country is plainly indicated. The time has come for stable and satisfactory settlements of traction difficulties.

The Commission can go no further than to point out the principles upon which readjustment should be based. The task is really that of the State and local authorities upon the one hand, and of the companies upon the other. Failure to rehabilitate the industry and the service is possible only if those upon whom the responsibility rests fail to undertake the work or pursue it in a spirit that makes settlement impossible.

Respectfully submitted this 28th day of July, 1920.

CHARLES E. ELMQUIST, *Chairman.*
EDWIN F. SWEET, *Vice Chairman.*
P. H. GADSDEN.
W. D. MAHON
ROYAL MEEKER.
C. W. BEALL.
LOUIS B. WEHLE.
GEORGE L. BAKER.

APPENDIX 10

(Signed) "R.F.S.'
" "A.F.M."
" "WA.A."
" "C.H.M."

Toronto, 18th July, 1921.

Dear Mr. Sutherland:

I now have the following statement from Mr. Robertson of his charges and disbursements:

Disbursements for assistance, experts, witnesses, stenographers, etc.	$ 18.000 00
L. A. Herdt, expert investigations	2,763 80
White Engineering Co., Account for expert investigations	11,158 09
R. M. Feustel, Expert investigations	678 50
Balance due to Mr. Robertson	4,315 28
	$ 36,915 67

I understand that Mr. Robertson has been paid $4.000 on account by the Commission. I have not therefore included this item in the statement but only the balance of his account, viz. $4,315.28.

I have not yet been able to get the details of the $18,000 item but I understand that this is substantially accurate. I am promised the details and if you wish it will forward them as soon as I receive them.

The advances to the commission direct total $101.000. namely, $6.000 in 1920 and $95,000 in 1921.

Yours sincerely,
(Singed) W. E. RANEY.

The Hon.
Mr. Justice Sutherland,
Deliver.

Toronto, July 19th, 1921.

Dear Mr. Sutherland:

The item of $18,000.00 in my letter of yesterday should it appears be in exact figures $17,619.54, made up according to the following statement:

Rent of offices, furniture, typewriters and janitor services	$ 1,227 71
Stenographers	2,626 00
Supplies, newspaper services, telephone, telegraphing and incidentals	754 86
Travelling expenses (Mr. Hawkes and Mr. Elson)	301 15
Witnesses, erpenses and fees	237 00
Mr. Hawkes	4.900 00
Mr. Elson (to March 15th, when engagement ended)	1,750 00
Mr. Vercoe (services and expenses in full)	5,822 82
	$ 17,619 54

Yours sincerely,
(Signed) W. E. RANEY

The Honourable,
R. F. Sutherland,
Osgoode Hall,
Toronto.

HYDRO- ELECTRIC POWER COMMISSION OF ONTARIO

Office of the Secretary
190 University Avenue,
Toronto, July 28th, 1921.

Mr. Justice Sutherland,
Chairman, Radial Railway Commission,
Osgoode Hall,
Toronto, Ont.

Dear Sir:—

Re Expenses of Hydro-Radial Investigation

With further reference to my letter to you of the 27th inst. and the foot note to your

letter of that date, I herewith enclose you the reference to the persons and amounts that go to make up the item of $114,453.54.

Yours truly,

(Signed) W. W. Pope,
Secretary.

DETAILS OF THE HYDRO-ELECTRIC POWER COMMISSION'S EXPENSE IN RESPECT TO RADIAL ENQUIRY.

ITEM—$114,453.54.

SALARIES:

Month.	Name.	Amount	Total
July 1920			
	T. U. Fairlie	$150 00	
	E. T. Agate	88 00	
	E. Awde	50 75	
	A. Bethune	10 50	
	H. B. Goedike	93 54	
	J. C. Krumm	113 75	
	A. C. Oxley	71 05	
	H. A. Rhodes	43 52	
	K. Weatherbe	96 00	
	H. A. Wood	95 70	
	H. Wykes	90 00	
	A. G. Young	54 18	
	R. L. Coulter	40 00	
	C. M. Low	108 50	
	L. H. Hornsby	4 25	
	H. W. Gzowski	44 40	
	Insurance	15 04	
	J. H. Congdon's Survey Party	137 09	
	A. H. Greenless	25 81	$1,332 08
August.			
	A. E. K. Bunnell	183 87	
	J. F. Clarke	58 06	
	J. Hall	46 45	
	E. R. Purvis	36 30	
	John G. Baukat	350 00	
	T. U. Fairlie	325 00	
	W. G. Hewson	425 00	
	H. A. S. Molyneaux	65 00	
	Romney Ames	95	
	E. W. Wood	33 60	
	R. M. A. Thompson	52 17	
	E. T. Agate	384 00	
	E. Awde	117 25	
	A. Bethune	130 50	
	Horace Beck	63 75	
	D. B. Gardner	144 50	
	H. B. Goedike	166 80	
	H. Gzowski	192 00	

Month.	Name.	Amount.	Total.
	F. H. Ianson	100 31	
	J. C. Krumm	223 50	
	S. G. Manley	43 20	
	A. C. Oxley	145 42	
	H. A. Rhodes	122 91	
	H. R. Silcox	4 00	
	K. Weatherbe	240 00	
	H. A. Wood	250 94	
	H. Wykes	126 00	
	A. G. Young	210 00	
	S. S. Kirby	172 80	
	R. L. Coulter	150 00	
	C. M. Low	150 50	
	S. F Gastrell	32 55	
	H. Jordan	20 00	
	E. M. Salter	162 60	
	D. S. Abbott	115 00	
	Roy N. Adams	100 00	
	D. O. Kelly	125 00	
	J. S. McIntyre	200 00	
	C. E. Tindale	125 00	
	J. Arnold Williamson	90 00	
	E. F. Hinch	220 00	
	R. G. Sneath	225 00	
	O. Stanley	250 00	
	L. H. Hornsby	140 14	
	G. H. McCall	11 20	
	H. D. Rothwell	18 90	
	W. P. Baulch	33 00	
	L. S. Locke	28 75	
	Insurance	60 41	
	J. H. Congdon Survey Party	280 65	
	G. F. Hanning Survey Party	165 00	
	Hamilton Survey Party	235 48	
	Toronto Terminal Survey Party	341 00	7,694 46
September.			
	W. A. Fairlie	50 81	
	T. A. Wilkinson	259 70	
	Alex. S. White	112 50	
	John G. Bauket	350 00	
	T. U. Fairlie	440 00	
	W. G. Hewson	425 00	
	A. H. McBride	25 50	
	W. R. Robertson	150 00	
	Romney Ames	3 15	
	B. Martin	6 60	
	David Ross	76 50	
	E. W. Wood	96 00	
	R. M. Thompson	78 27	
	E. T. Agate	400 00	

Month.	Name.	Amount.	Total.
	E. Awde	141 75	
	A. Bethune	132 00	
	W. B. Gardner	18 70	
	F. B. Goedike	101 40	
	H. Gzowski	75 60	
	F. H. Ianson	53 62	
	J. C. Krumm	69 00	
	S. G. Manley	45 60	
	A. C. Oxley	59 15	
	H. A. Rhodes	93 32	
	K. Weatherbe	300 00	
	H. A. Wood	197 05	
	H. Wykes	193 50	
	A. G. Young	99 33	
	S. S. Kirby	180 00	
	R. L. Coulter	180 00	
	C. M. Low	175 00	
	S. F. Gastrell	49 50	
	Harold Jordan	20 00	
	E. M. Salter	140 00	
	W. A. Fairlie	175 00	
	D. S. Abbott	57 50	
	Roy N. Adams	100 00	
	D. O. Kelly	125 00	
	J. S. McIntyre	200 00	
	C. E. Tindale	125 00	
	J. Arnold Williamson	90 00	
	E. F. Hinch	220 00	
	R. G. Sneath	225 00	
	O. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. Molyneaux	130 00	
	E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	J. Hall	160 00	
	E. R. Purvis	125 00	
	L. H. Hornsby	50 87	
	V. A. Beacock	112 50	
	J. H. Caster	154 00	
	S. B. Iler	50 00	
	J. J. Jeffery	34 00	
	H. D. Rothwell	162 00	
	F. T. Stocking	161 70	
	J. N. Wilson	108 50	
	W. P. Baulch	150 00	
	L. S. Locke	87 00	
	M. J. Kennedy	50 00	
	Insurance	43 54	
	J. H. Congdon Survey Party	264 33	
	Hamilton Terminal Survey Party	120 00	
	G. F. Hanning Survey Party	314 00	
	A. H. Greenless Survey Party	25 00	
	Railway Traffic Counting Payroll, August	127 80	
	Railway Traffic Counting Payroll, August	218 70	

Month.	Name.	Amount.	Total.
	Railway Traffic Counting Payroll, August	42 00	
	Railway Dept. Overtime (August)	558 48	
	Electric Railway Dept. Pay Roll	154 00	
	Electric Railway Dept. Pay Roll (Temporary)	47 00	10,666 47
October.			
	J. G. Baukat	350 00	
	T. U. Fairlie	180 00	
	W. G. Hewson	425 00	
	A. H. McBride	26 56	
	W. R. Robertson	300 00	
	R. M. Thompson	86 67	
	E. T. Agate	304 00	
	E. Awde	175 00	
	A. Bethune	75 00	
	H. Gzowski	86 40	
	S. G. Manley	55 20	
	K. Weatherbe	120 00	
	H. A. Wood	137 78	
	H. Wykes	218 25	
	S. S. Kirby	180 00	
	R. L. Coulter	110 00	
	C. M. Low	175 00	
	S. F. Gastrell	3 45	
	H. Jordan	24 00	
	E. M. Salter	107 80	
	W. A. Fairlie	168 00	
	R. N. Adams	100 00	
	D. O. Kelly	125 00	
	J. S. McIntyre	100 00	
	C. E. Tindale	125 00	
	E. F. Hinch	220 00	
	R. G. Sneath	225 00	
	O. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. Molyneaux	130 00	
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	J. Hall	142 00	
	E. R. Purvis	125 00	
	F. T. Stocking	8 75	
	W. P. Baulch	150 00	
	L. S. Locke	28 50	
	M. J. Kennedy	100 00	
	Insurance	37 17	
	Traffic Counting Pay Roll (October)	264 05	
	Traffic Counting Pay Roll (October)	30 90	
	Traffic Counting Pay Roll (October)	91 00	
	Survey Party Counting Pay Roll (October)	451 88	6,862 36

Month.	Name.	Amount	Total
1920.			
November:			
	J. G. Baukat	350 00	
	A. S. L. Barnes	37 15	
	T. U. Fairlie	190 00	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	E. T. Agate	80 00	
	E. Awde	42 00	
	A. Bethune	18 00	
	R. Coulter	38 00	
	H. Jordan	10 00	
	S. S. Kirby	18 00	
	C. M. Low	12 25	
	C. M. Low	10 50	
	S. Manley	4 00	
	E. M. Salter	42 00	
	K. Weatherbe	33 00	
	H. Wykes	20 25	
	W. P. Baulch	150 00	
	Roy N. Adams	100 00	
	D. O. Kelly	125 00	
	J. S. McIntyre	100 00	
	C. E. Tindale	31 25	
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	E. F. Hinch	220 00	
	H. Molyneaux	130 00	
	E. R. Purvis	125 00	
	R. G. Sneath	225 00	
	O. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. D. Rothwell	18 00	
	M. J. Kennedy	100 00	
	L. S. Locke	84 00	
	Insurance	38 32	
	J. H. Congdon's Survey Payroll (October)	455 97	
	Traffic Counting Payroll	787 20	
	Traffic Counting Payroll	114 60	
	Miscellaneous	28 30	
	Traffic Counting Payroll (November)	242 00	
	Temporary Staff Payroll	144 00	
	Miscellaneous Survey Payroll	120 00	6,068 79
December.			
	J. G. Baukat	350 00	
	A. S. L. Barnes	123 75	
	T. U. Fairlie	112 50	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	E. T. Agate	76 00	
	R. L. Coulter	30 00	

Month.	Name.	Amount.	Total.
	L. H. Hornsby	31 48	
	H. Jordan	14 00	
	S. S. Kirby	39 60	
	C. M. Low	50 75	
	C. M. Low	5 25	
	A. C. Oxley	11 73	
	K. Weatherbe	81 00	
	H. A. Wood	81 12	
	H. Wykes	24 75	
	A. G. Young	39 48	
	R. N. Adams	100 00	
	D O. Kelly	125 00	
	J. S. McIntyre	50 00	
	A. E, K. Bunnell	300 00	
	Norman A. Faulkner	90 00	
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. A. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	275 00	
	O. Stanley	350 00	
	T. A. Wilkinson	375 00	
	R. A. Paul	169 36	
	H. T. Bates	148 40	
	W. P. Baulch	150 00	
	W. P. Baulch	15 00	
	L. S. Locke	52 50	
	M. J. Kennedy	75 00	
	Insurance	37 42	
	Railway Checkers Payroll, Dec. 4th	210 60	
	Railway Checkers' Payroll, Dec. 11th	91 20	
	Railway Checkers' Payroll, Dec. 21st	90 00	
	Railway Dept. Overtime	302 00	
	Railway Checkers' Payroll, Dec. 28th	85 80	
	Railway Checkers' Payroll, Dec. 31st	75 60	5,644 29
1921			
January			
	J. G. Baukat	$ 350 00	
	A. McIntee	10 50	
	A. S. L. Barnes	118 25	
	T. U. Fairlie	275 00	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	E. T. Agate	184 00	
	A. Bethune	24 00	
	R. Coulter	48 00	
	H. Jordan	10 00	
	S. S. Kirby	37 80	
	C. M. Low	96 25	
	K. Weatherbe	79 50	
	H. A. Wood	102 30	
	H. Wykes	65 25	

Month	Name	Amount	Total
	Lester S. Locke	16 50	
	N. K. Faulkner	90 00	
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	225 00	
	O. Stanley	300 00	
	T. A. Wilkinson	350 00	
	R. A. Paul	16 93	
	H. T. Bates	200 00	
	W. P. Baulch	150 00	
	M. J. Kennedy	75 00	
	Insurance	18 53	
	Railway Checkers Payroll, Jan. 8th	97 20	
	Railway Checkers Payroll, Jan. 11th	46 00	
	Railway Checkers Payroll Jan. 21st	97 80	
	Railway Checkers Payroll Jan. 24th	140 40	
	Railway Checkers Payroll, Jan. 29th	99 30	
	Survey Payroll Jan. 1—31	41 00	
	Survey Payroll (E. Duncan party)	42 00	
	Railway Checkers Payroll Feb. 6th	120 00	
		—————$	5,231 91
February			
	John G. Baukat	$ 262 50	
	A. S. L. Barnes	93 50	
	T. U. Fairlie	300 00	
	T. U. Fairlie	200 00	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	R. A. Paul	112 00	
	E. T. Agate	232 00	
	E. Awde	96 25	
	A. Bethune	87 00	
	H. W. Beck	22 40	
	R. L. Coulter	100 00	
	W. A. Fairlie	78 75	
	H. Jordan	30 00	
	S. Kirby	162 00	
	C. M. Low	175 00	
	S. G. Manley	60 30	
	G. H. McCall	42 00	
	K. Weatherbe	150 00	
	H. A. Wood	126 50	
	H. Wykes	78 75	
	A. McIntee	175 00	
	P. M. Higgins	158 90	
	J. B. Waterous	124 96	
	R. N. Adams	100 00	
	D. O. Kelly	125 00	
	J. S. McIntyre	50 00	
	N. A. Faulkner	90 00	

Month	Name	Amount	Total
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	225 00	
	A. Sanley	300 00	
	T. A. Wilkinson	350 00	
	H. T. Bates	200 00	
	W. P. Baulch	150 00	
	M. J. Kennedy	75 00	
	Lester S. Locke	9 00	
	Insurance	50 54	
	Railway Checkers Payroll, Feb. 16	156 00	
	Railway Checkers' Payroll, Feb. 21	41 40	
	Railway Checkers' Payroll, Feb. 16-28	244 40	
	E. Duncan Survey Party Payroll	283 45	
	A. H. Greenless Survey Party	590 00	
		-$	7,612 60
March			
	J. G. Baukat	350 00	
	A. S. L. Barnes	75 90	
	T. U. Fairlie	325 00	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	E. T. Agate	216 00	
	E. Awde	148 75	
	A. Bethune	118 50	
	R. L. Counter	126 00	
	W. A. Fairlie	96 25	
	F. B. Goldike	8 60	
	H. Jordan	34 00	
	S. S. Kirby	142 20	
	C. M. Low	80 50	
	E. G. Manley	88 20	
	A. C. Oxley	98 00	
	H. A. Rhodes	124 10	
	K. Weatherbe	225 00	
	H. A. Wood	55 00	
	M. J. Kennedy	75 00	
	H. Wykes	148 50	
	A. T. Spencer	148 50	
	H. Robertson	175 00	
	Lester Locke	16 50	
	H. Robertson	175 00	
	P. M. Higgins	16 50	
	W. P. Baulch	150 00	
	J. B. Waterous	138 25	
	A. S. Abbott	115 00	
	J. S. McIntyre	50 00	
	N. A. Faulkner	90 00	
	A. E. K. Bunnell	300 00	

Month	Name	Amount	Total
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	225 00	
	A. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. I. Bates	200 00	
	Insurance	59 88	
	Railway Checkers' payroll, March 1-15	172 20	
	Railway Checkers' payroll, March 16-31	286 80	
	Miscellaneous survey party payroll	794 95	
			$7,705 08
April			
	J. G. Baukat	350 00	
	A. S. L. Barnes	41 25	
	T. U. Fairlie	290 00	
	W. G. Hewson	425 00	
	W. R. Robertson	400 00	
	R. A. Paul	18 00	
	E. T. Agate	104 00	
	E. Awde	14 00	
	A. Bethune	132 00	
	H. W. Beck	49 00	
	R. L. Coulter	88 00	
	L. H. Hornsby	20 35	
	H. Jordan	30 00	
	J. C. Krumm	60 00	
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	225 00	
	A. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. I. Bates	200 00	
	S. S. Kirby	82 80	
	Lester Locke	4 50	
	C. M. Low	126 00	
	W. P. Baulch	150 00	
	S. G. Manley	85 50	
	M. J. Kennedy	100 00	
	J. H. McCall	49 00	
	A. C. Oxley	35 00	
	H. R. Silcox	51 20	
	K. Weatherbe	144 00	
	H. A. Wood	66 55	
	J. S. McIntyre	100 00	
	H. Wykes	150 75	
	R. N. Adams	100 00	
	A. T. Spencer	57 75	

Month	Name	Amount	Total
	D. O. Kelly	125 00	
	H. Robertson	175 00	
	D. S. Abbott	115 00	
	A. McIntee	175 00	
	J. B. Waterous	152 25	
	W. L. Dixon	33 60	
	Insurance	50 40	
	Railway checkers' payroll, April 15	244 80	
	Railway dept. overtime	390 00	
	Miscellaneous payroll, April 30	678 10	
	Railway Frt. checkers' payroll	1,051 65	
			$ 8,570 45
May			
	C. M. Low	101 50	
	S. S. Kirby	66 60	
	J. G. Baukat	350 00	
	J. C. Krumm	17 50	
	A. S. L. Barnes	13 20	
	W. M. Bostwick	34 50	
	H. Jordan	28 00	
	L. H. Hornsby	68 45	
	T. U. Fairlie	241 50	
	R. L. Coulter	87 60	
	H. G. Hewson	425 00	
	H. W. Beck	140 00	
	W. R. Robertson	300 00	
	A. Bethune	105 00	
	R. M. A. Thompson	19 56	
	E. Awde	133 00	
	E. T. Agate	320 00	
	S. G. Manley	79 20	
	A. Stanley	300 00	
	C. W. Motton	100 00	
	N. A. Faulkner	90 00	
	H. A. Rhodes	15 30	
	D. O. Kelly	125 00	
	K. Weatherbe	252 00	
	H. T. Bates	200 00	
	C. E. Tindale	125 00	
	H. A. Wood	19 25	
	H. Wykes	189 50	
	R. N. Adams	100 00	
	A. G. Young	53 97	
	D. S. Abbott	115 00	
	A. T. Spencer	7 45	
	A. McIntee	175 00	
	H. Robertson	169 75	
	E. R. Purvis	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	J. F. Clarke	150 00	
	R. G. Sneath	225 00	

Month	Name	Amount	Total
	Lester Locke	45 00	
	A. E. K. Bunnell	300 00	
	M. J. Kennedy	75 00	
	T. A. Wilkinson	350 00	
	W. P. Baulch	150 00	
	J. S. McIntyre	200 00	
	Insurance	111 95	
	Insurance	11 95	
	Railway checkers' payroll	24 00	
	Miscellaneous, Office and Service Bldg., Payroll, May 1-15	1 37	
	Railway checkers' payroll, May 1-15	2,361 10	
	A. J. Clark, salary	50 00	
	Miscellaneous, Office and Service Buildings, Payroll, May 16-31	1 37	
	Temporary help payroll	95 00	
	Miscellaneous Electric Railway payroll	518 41	
	Railway Dept., overtime payroll	150 00	
			$ 9,856 03
June			
	J. G. Baukat	350 00	
	Wm. Bostwick	23 00	
	T. U. Fairlie	211 50	
	W. G. Hewson	425 00	
	W. R. Robertson	300 00	
	E. Awde	14 00	
	A. Bethune	57 00	
	R. L. Coulter	83 00	
	L. H. Hornsby	185 00	
	H. Jordan	16 00	
	J. C. Krumm	57 50	
	C. M. Low	8 75	
	K. Weatherbe	138 00	
	A. G. Young	52 50	
	H. Robertson	33 08	
	A. McIntee	175 00	
	D. S. Abbott	115 00	
	R. N. Adams	100 00	
	D. O. Kelly	125 00	
	G. S. McIntyre	150 00	
	A. E. K. Bunnell	300 00	
	J. F. Clarke	150 00	
	E. F. Hinch	250 00	
	H. Molyneaux	130 00	
	E. R. Purvis	150 00	
	R. G. Sneath	225 00	
	A. Stanley	300 00	
	T. A. Wilkinson	350 00	
	H. T. Bates	200 00	
	W. P. Baulch	150 00	
	M. J. Kennedy	75 00	

Month	Name	Amount	Total
	L. S. Locke	6 00	
	Insurance	44 26	
	Railway checkers' payroll, May 16-31	2,751 50	
	Railway checkers' payroll, June 1-10	177 60	
	Miscellaneous, payroll, June 30th	2 00	
	Railway checkers' payroll, June 21	560 40	
	Miscellaneous, survey party payroll	612 50	
	Car checkers' payroll, June 16-30	614 90	
	Car checkers' payroll, July 2	168 00	
			$ 9,836 49
July			
	Salaries for July (estimated)	5,214 62	
	Transferred from Electric Railways:		
	Wentworth-Waterloo Lines	6,898 99	
	Niagara-St. Catharines Lines	1,225 72	
	Toronto-Suburban Railway	2,745 40	
			$ 16,084 73
	TOTAL SALARIES		$103,165 74

EXPENSES:

Name.	Date.	Amount.	Total
A. H. Greenless	Aug., 1920	$ 6 80	
	Sept., 1920	15 97	$ 22 77
F. Ferrier	Aug., 1920	17 30	
	Nov., 1920	34 10	
	March, 1921	12 50	
	April, 1921	25 32	
			89 22
J. H. Congdon	Aug., 1920	50 00	
	Sept., 1920	190 15	
	Oct., 1920	84 75	
	Nov., 1920	66 00	
	Dec., 1920	10 00	
			400 90
A. L. McDougall	Sept., 1920	37 40	
	Feb., 1921	48 00	
			85 40
T. U. Fairlie	Sept., 1920	125 83	
	Oct., 1920	13 43	
	Nov., 1920	211 54	
	Dec., 1920	3 18	
	March, 1921	4 60	
	April, 1921	49 69	
	May, 1921	64 12	
	June, 1921	32 46	
	July, 1921	8 57	
			513 42
H. W. Gzowski	Sept., 1920		60
G. F. Hanning	Sept., 1920		51 00
V. A. Beacock	Sept., 1920		43 40

Name	Date		Amount	Total
G. F. Gorham	Sept., 1920	50		
	Oct., 1920	50		
			1 00	
W. H. Fawcett	Sept., 1920	80		
	Oct., 1920	65		
	Jan., 1921	1 45		
	Feb., 1921	90		
	April, 1921	2 50		
			6 30	
E. T. Agate	Sept., 1920	14 75		
	Oct., 1920	16 95		
			31 70	
L. S. Locke	Oct., 1920	4 45		
	Nov., 1920	5 05		
			9 50	
F. T. Stocking	Oct., 1920		10 25	
J. N. Wilson	Oct., 1920		19 60	
J. H. Carter	Oct., 1920		30 55	
W. N. Robertson	Oct., 1920	95 40		
	Jan., 1921	108 10		
	April, 1921	116 90		
	July, 1921	151 10		
			471 50	
A. S. White	Oct., 1920	55 15		
	Nov., 1920	27 80		
			82 95	
H. S. Rothwell	Oct., 1920	42 15		
	Dec., 1920	6 45		
			48 60	
S. B. Iler	Oct., 1920		17 40	
R. F. McGill	Oct., 1920		85	
A. F. McGill	Oct., 1920		36 00	
E. R. Bradley	Nov., 1920	87 90		
	Jan. 1921	22 40		
			110 30	
E. Duncan	Nov., 1920	2 29		
	April, 1921	20 60		
	May, 1921	5 00		
			27 89	
H. A. Wood	Nov., 1920		1 85	
W. G. Hewson	Nov., 1920	127 17		
	Jan., 1921	558 17		
	March, 1921	523 42		
	May, 1921	905 29		
	June, 1921	466 16		
			2,580 21	

Name	Date		Amount	Total
D. Marshall	Nov., 1920		67 85	
T. A. Wilkinson	Dec., 1920		198 90	
A. G. Young	Dec., 1920		32 85	
J. C. Baukat	Feb., 1921		292 42	
E. B. Davis	Feb., 1921		10 00	
J. E. Clark	March, 1921		13 10	
W. J. Baulch	March, 1921		4 53	
A. McPherson	March, 1921		46 15	
R. Ridgeway	April, 1921		80 11	
Colson, Brice & McCann	April, 1921		26 29	
J. A. Wills	May, 1921		34 10	
E. E. Fry	May, 1921		34 60	
S. C. Honsberger	May, 1921		64 10	
C. Misener	May, 1921		34 10	
W. M. Bostwick	May, 1921	90		
	June, 1921	3 85		
			4 75	
R. S. Coulter	May, 1921	61 49		
	June, 1921	50 14		
			111 63	
W. E. Cann	May, 1921		212 90	
H. C. Bates	July, 1921		1 50	
Petty Cash	Sept., 1920	41 80		
	Oct., 1920	137 51		
	Nov., 1920	84 35		
	Dec., 1920	68		
	April, 1921	60 42		
			324 76	
			6,287 80	
	Estimated Additional Expenses		5,000 00	11,287 80
				$114,453 54

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Office of the Secretary
190 University Ave.,
Toronto, July 26th, 1921

The Hon. Mr. Justice Sutherland,
Chairman, Radial Railways Commission,
Osgoode Hall,
Toronto.

Dear Sir,—In further reference to your communication of June 29, addressed to Mr. C. C. Robinson, in which you request certain information on the expenditures of the Hydro-Electric Power Commission of Ontario in connection with Hydro-Electric Railways and your Commission; I am instructed by the Commission to enclose you detailed statements Nos. 1, 2 and 3, as follows, viz:—

No. 1. A statement of the amounts expended by the Commission on investigation, surveys, by-laws and reports under the Hydro-Electric Railway Act of 1914.

No. 2. A statement of the expenditures of the Commission on behalf of the Municipalities and the Hydro-Electric Radial Association, and other expenses of the Hydro-Electric Power Commission contracted in respect of the enquiry, but which may be charged to capital account, provided the construction of the proposed lines is proceeded with.

No. 3. A statement of expenditures on account of Hydro-Electric Railways chargeable to capital account.

The statements enclosed cover all expenditures made by the Commission on account of Hydro-Electric Railways, or the investigation before your Commission, to date.

I am,

Yours truly,

(Signed) W. W. POPE,
Secretary

STATEMENT No. 1.

ELECTRIC RAILWAY ENGINEERING, INVESTIGATIONS, SURVEYS, BY-LAWS AND REPORTS UNDER HYDRO-ELECTRIC RAILWAY ACT, 1914.

For Fiscal Period ending October 31, 1914	$ 42,385 47
For Fiscal Period ending October 31, 1915	45,925 18
For Fiscal Period ending October 31, 1916	38.675 66
For Fiscal Period ending October 31, 1917	37,909 76
For Fiscal Period ending October 31, 1918,	9,597 29
For Fiscal Period ending October 31, 1919	47,156 48
For Fiscal Period ending October 31, 1920	68,609 86
Period Nov. 1, 1920 to July 2, 1921	4.036 41
	$294.296 11

STATEMENT No. 2.

EXPENSES OF THE MUNICIPALITIES AND THE HYDRO-ELECTRIC POWER COMMISSION
RE
ROYAL COMMISSION INVESTIGATING PROPOSED HYDRO RADIALS

On behalf of Municipalities and Hydro-Electric Radial Association:

Counsel	$ 36.955 00
Experts and Assistants	87.610 81
Transcript of Evidence	10.538 60
Hydro-Electric Power Commission:	
Counsel	28.029 82
Salaries and Expenses of Engineers and Assistants	114.453 54
General Administrative Office Expense, including proportionate share of salaries of Executive, Accounting and Stenographic Departments	8.016 73
Miscellaneous—Blue Prints, Photographs, Stationery, etc., etc.	8.063 02
Interest accrued upon all above expenditures	6.185 63
Other expenses of Hydro-Electric Power Commission of Ontario contracted in respect of enquiry, but may be charged to capital account providing construction of the proposed lines is proceeded with:	
Toronto-Port Credit Line	3.595 26
Port Credit-St. Catharines Line	16,521 77
Toronto-Eastern Line	12.249 15

July 23, 21.

STATEMENT No. 3

EXPENDITURES ON ACCOUNT OF HYDRO-ELECTRIC RAILWAYS
CAPITAL ACCOUNT

	Expenditure to July 20-20	Expenditure July 20-20 to July 2-21.	Total
Toronto-Port Credit Line:			
Engineering, Superintendence, Surveys, etc.	$ 16,834 81		16,834 81
Right of way, cost of land and purchasing expenses	623,340 02	* 6,328 60	629,668 62
Miscellaneous Expense, printing and checking bonds, etc.	989 02	6,190 69	7,179 71
Interest	25,530 63	36,199 49	61,730 12
	$666,694 48	$ 48,718 78	$715,413 26
Port Credit-St. Catharines Line:			
Engineering, Superintendence, Surveys, etc.	$ 47,868 78		$ 47,868 78
Right of way, cost of land and purchasing expenses	63,996 33	* 9,047 33	73,043 66
Ties Purchased	72,281 35	* 262,766 88	335,048 23
Miscellaneous Expense, printing and checking bonds, etc.	14,723 85		14,723 85
Interest	3,844 11	18,115 68	21,959 79
	$202,714 42	$289,929 89	492,644 31
Toronto-Eastern Line:			
Engineering, Superintendence, Surveys, etc.	$ 27,041 95		$ 27,041 95
Miscellaneous Expense, printing and checking bonds, etc.	2,661 33	10,213 09	12,874 42
Interest	835 18	1,230 39	2,065 67
	$ 30,538 46	$ 11,443 48	$ 41,981 94

SUMMARY:

Toronto-Port Credit Line	$ 715,413 26
Port Credit-St. Catharines Line	492,644 31
Toronto-Eastern Line	41,981 94
	$1,250,039 51
Surveying Instruments and other equipment	4,201 60
TOTAL	$1,254,241 11

*Contracted for before July 21st.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Office of the Secretary
190 University Ave.,
Toronto, July 27th, 1921.

Mr. Justice Sutherland,
Chairman, Radial Railway Commission,
Osgoode Hall,
Toronto, Ont.

RE EXPENSES OF HYDRO-RADIAL INVESTIGATION

Dear Sir:—

Your letter of July 27th came duly to hand in which you ask for additional information with respect to the statements furnished:

1: Does the item $36,955.00 refer to Mr. McKay's Counsel fees?
Yes. This represents the total sum paid to Mr. McKay.

2: Does this item of $87,610.81 include Mr. Arnold's fees (including assistance and expenses) and if so how much thereof is referable to his said fee and expenses?
Yes. Mr. Arnold's fees and expenses are $54,355.17.

3: Does the item for Hydro-Electric Power Commission Counsel of $28,029.82 refer to the Counsel fees of Mr. MacInnnes and Mr. C. C. Robinson.
Yes. Mr. C. S. MacInnes $8,580.45 and Mr. C. C. Robinson $19,449.37.

As to the other items of $114,453.54 you ask that the Commission give some brief and general details with reference to persons and amounts. As regards this last item, I am advised by the Chief Accountant, who has his Staff engaged at present in the preparation of these details, that owing to the fact that the sum is made up from monthly salary expenses, including employees engaged in this and other work, it is necessary to examine all salary payrolls from July, 1920, to the end of the present month, in order to get the percentage of these payrolls charged to this particular account. That, I am advised, would be quite impossible to have completed for you this evening. I am advised, however, that it will in all probability be ready by this time to-morrow.

I assure you that every effort will be made to get this information to you at the earliest possible moment.

Yours truly,
(Signed) W. W. POPE,
Secretary.

APPENDIX 11

(Signed) "R.F.S."
" "A.F.M."
" "W.A.A."
" "C.H.M."

REPORT OF F. C. CLARKSON, ESQUIRE, F.C.A., RESPECTING HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO HYDRO-ELECTRIC RE FINANCES

Toronto, March 3rd, 1920.

Dear Sir:

Re Hydro-Electric Power Commission of Ontario

I shall be obliged if, at your early convenience, you will, as the Auditor appointed to audit and report to the Government upon the accounts of the Hydro-Electric Power Commission of Ontario, inform me in a brief manner as to—

1. The state of the affairs of each of the Systems and Companies controlled or operated by the Commission.
2. The approximate amount of money which must be obtained by the Province within the next two years and be loaned to the Commission in order to allow it to complete works undertaken by it and now in course of construction, and to pay debts which become due within that period.

In addition, I request that you, as Auditor, express your opinion as to the soundness, from a business standpoint, of each of the undertakings now operated by the Commission, and as to whether there are any reasons why, with the Government sympathetic and desirous of supporting the Commission, so far as it can be done with benefit to the municipalities and the Province, the Government cannot safely continue and extend support to the Commission.

I desire to say that the information asked for is of such importance that I would appreciate a report from you without undue delay.

Yours very truly,
(Signed) E. C. DRURY.

G. T. Clarkson, Esq., Accountant,
15 Wellington Street West,
Toronto, Ontario.

Toronto, March 19th, 1920.

The Honourable E. C. Drury,
Premier of the Province of Ontario, Toronto.

Sir:

Hydro-Electric Power Commission of Ontario.

I am in receipt of your communication of the 3rd inst., wherein you request that, as Auditor appointed to audit the accounts of the Hydro-Electric Power Commission of Ontario and to report thereon to the Government, I inform you in brief manner as to—

(*a*) The state of affairs of each of the systems and companies controlled or operated by the Commission, and

(*b*) The approximate amount of money which must be obtained by the Province within the next two years and be loaned to the Commission in order to allow it to complete works undertaken by it and now in course of construction, and to pay debts which become due within that period.

In addition, you request that I, as Auditor, express my opinion as to the soundness, from a business standpoint, of each of the undertakings now operated by the Commission, and as to whether there are any reasons why, with the Government sympathetic and desirous of supporting the Commission, so far as it can be done with benefit to the municipalities and the Province, it cannot safely continue and extend support to the Commission.

In reply thereto I beg to report that the undertakings controlled and operated by the Commission divide themselves into the following classes, namely:

1. The Niagara System.
2. The Severn System.
3. The St. Lawrence System.
4. The Wasdell System.
5. The Eugenia System.
6. The Ottawa System.
7. The Muskoka System.
8 The Rideau System.
9. The Thunder Bay System.

all of which systems either purchase or develop power and distribute it to municipalities which are under contract with the Commission to pay the cost of such power, including interest on the cost of works, provisions for renewal of works and sinking fund allowances for the repayment of the cost of the works of each system respectively. In addition, the Commission has acquired and owns:

10. The Essex System,

which purchases power from the Niagara System and disposes of it to private and other customers located in seven municipalities in Essex County;

11. The Thorold System,

which is a system of lines employed to transmit power to certain customers in the vicinity of the Town of Thorold;

12. The Monteith Development,

constructed by the Commission for the Department of Agriculture of the Province of Ontario for use by it for purposes of Soldiers' Re-establishment;

13. The Ontario Power Company (and its subsidiary, The Ontario Transmission Company, Limited),

operated as a separate entity, which supplies under contract and otherwise a large proportion of the power distributed by the Niagara System, and also sells power to other customers;

14. The Bonnechere River Storage System,

which is a small water storage system adjacent to the Town of Renfrew.

The Commission manages and operates:

15. The Central Ontario System,

on behalf of the Province of Ontario and at the sole risk of the Province.

It has under construction:

16. The Ontario Niagara Development Works (Chippawa Power Canal), for the purpose of affording an additional supply of power to the Niagara System.

The Commission is also engaged in promoting the construction and operation of:

17 Hydro-Electric Radial Railway Lines.

under the terms of the Hydro-Electric Railway Act, 1914, and for those municipalities which have contracted with it in respect thereto.

The condition of affairs of each of such systems and undertakings is as follows:

1. *Niagara System.*

The Niagara System purchases power in the vicinity of Niagara Falls, Ontario, and distributes it to 115 municipalities and 26 other customers located between Niagara Falls and Toronto and Dundas and Windsor, in the Province of Ontario. The investment of the Commission in System to 31st October, 1919, the end of its last fiscal year, amounted to $14,306,372, provided out of moneys advanced to the Commission by the Province of Ontario.

At its inception the System purchased its complete supply of power from the Ontario Power Company, under a contract expiring April 1st, 1950, which permits the Commission to take upwards of 100,000 horse-power at the price of $9 per horse-power, and such price is mentioned in the early contracts made between municipalities and the Commission; subsequently with increased demands upon the System the Commission found it necessary to purchase further power and at prices in excess of $9 per horse-power—accordingly the Power Commission Act was amended and the Commission given authority to charge the municipalities with the average cost of power purchased, acquired or developed by it in the vicinity of Niagara Falls.

In order to obtain additional power for the Niagara System, and so that it might control water privileges of importance on the Niagara River, the Commission as of date 1st August, 1917, purchased the Ontario Power Company, which owned an hydraulic power development works, with a capacity of about 160,000 horse-power at Niagara Falls. The price paid for the undertaking was $7,994,900 in 40-year 4 per cent. bonds of the Commission, guaranteed by the Province of Ontario, and for these the Commission obtained ownership of practically the entire capital stock of the Ontario Power Company amounting to $10,000,000 par value. The assets of the Ontario Power Company and its subsidiary, the Ontario Transmission Company, Limited, were, at the time of purchase, subject to bonded indebtedness of about $14,450,000 held by the public.

Subsequent to the purchase of control of the Ontario Power Company and up to 31st October, 1919, the Commission advanced $3,510,441 to that Company for the construction of a third pipe line to its works and to permit it to acquire and instal electrical equipment necessary to develop 50,000 horse-power additional from water employed through the pipe line. It was estimated that the pipe line and equipment would cost between $1,500,000 and $2,000,000,, and that profits from sale of the extra power so to be obtained and indemnities looked to be received from the Dominion Government would before the spring of 1923 largely defray, if not wholly return, the cost of the pipe line—accordingly the Company agreed, under written contract with the Queen Victoria Niagara Falls Park Commission, to remove the pipe line on or before that date. The pipe line came into use about June, 1919, and it is now apparent with increase in the costs of the pipe line and equipment, that the expectations of the Commission will not be fully realized but it is probable that if the Power Company shall remove the pipe line by the date mentioned it will do so at the cost to itself of a substantial loss. The Commission states that the Queen Victoria Niagara Falls Park Commission has agreed to allow the pipe line to remain for as long as it shall be required by the Ontario Power Company provided certain specific improvements be made.

Under Section 22 of the Power Commission Act, the expenditures of the Commission upon any works undertaken for the benefit of any municipality or municipalities are repayable by such municipalities, and this provision, it is held, makes the municipalities on the Niagara System responsible for the cost to the Commission of the Ontario Power Company and of the third pipe line to its works. Under section 23 of the Act, the municipalities are liable for the cost of

power to the Commission at the point of development for operating costs and for interest upon the cost of the works and for sinking fund payments. Legal opinion is, therefore, that the municipalities on the Niagara System must in each year pay to the Commission:

1. Interest on the $7,994,900 bonds given by the Commission as the purchase price of the capital stock of the Ontario Power Company.
2. Interest on the advances made by the Commission to the Ontario Power Company for construction of the third pipe line and added equipment to the works of the Ontario Power Company.
3. Sinking fund allowances sufficient to repay the purchase price paid for the capital stock of the Power Company and the cost of the third pipe line and electrical equipment,
4. The contract price of $9 per horse-power and $12 per horse-power now charged for power by the Ontario Power Company to the Niagara System.

Less

5. Any excess of income over operating costs of the Power Company, as the cost to such municipalities of power delivered to the Niagara System by the Ontario Power Company in each year.

Under the terms of the Ontario Niagara Development Works Act., 1916, and in 1916, the Commission commenced construction of the Chippawa Power Canal for the purpose of affording a still further supply of power to the Niagara System, and work upon it has to this point been largely carried on by day labour under the control and supervision of the Commission. Estimates submitted in or about June, 1915, indicated that the works would probably cost approximately $10,500,000 for a canal capable of producing 100,000 horse-power, with extensions to 300,000 horse-power and electrical equipment capable of generating 100,000 horse-power. Subsequently and after construction had been commenced, it was believed with increasing costs that $15,000,000 to $16,000,000 would require to be expended on the works. Since that time the capacity of the canal has been increased by the Commission over that contemplated in 1915, and when finished the works will, with necessary electrical equipment installed, be capable, it is estimated, of developing upwards of 450,000 horse-power. The sum of $40,000,000 is now stated as the possible ultimate cost of the works and of such amount approximately $18,500,000 has been expended to date. The works are expected to be in a position to deliver power in the fall of 1921.

The Niagara Development Works Act requires that power supplied by the Chippawa Works shall be paid for at the cost of the same to the Commission, including:

(*a*) Interest on the cost of the works.

(*b*) Provision for the renewal of the works,

(*c*) Sinking fund for repayment of the cost of the works, and

(*d*) Such other charges as the Commission may deem necessary and proper, and this means that after deducting the amounts recovered from the sale of power to other customers, the municipalities on the Niagara System will, with the supply of Chippawa power to them, be responsible for the cost of operating the Chippawa works and to repay through sinking fund —when and as the same shall be required—the investment of the Commission in the Chippawa works.

Under a Treaty between the Dominion of Canada and the United States of America regulating the use of the waters of the Niagara River, the Dominion of Canada, in the right of the Province of Ontario, is entitled to divert 36,000 cubic feet per second of the waters of the Niagara River above the Falls. Of this 36,000 second feet the Ontario Power Company is said to be entitled to divert such amount as it shall require through any works located and constructed within the confines of the Queen Victoria Niagara Falls Park, with the approval of the Commission in control of such Park; thereafter other licensees have the right, with limitations, to the use of the water remaining. The Ontario Power Company with its third pipe line, is now diverting upwards of 13,000 to 13,500 second feet, while the Electrical Development Company, the Canadian Niagara Power Company and other users are diverting approximately 19,000 to 20,000 second feet—a total of 32,000 to 33,500 second feet. In addition, the Electrical Development Company is contending for the right to divert the whole or a part of the surplus remaining of 2,500

to 4,000 second feet. and litigation exists in respect of such claim. Under the circumstances it is apparent that the supply of water remaining is, with operation of the Ontario Power Company Works, inadequate for the purposes of the full proposed development of the Chippawa Power Canal. It will be of advantage, therefore, to obtain an amendment to the Treaty so that an additional supply of water may become available for such works. The Commission states that of the 13,500 feet of water now employed by the Ontario Power Company it intends to divert 3,500 feet to the Chippawa Canal and that such water, with the surplus water above mentioned and 1,000 to 1,400 feet to be obtained from the spillway of the Welland Canal will be available to produce upwards of 275000 horsepower from the initial development at Chippawa Works and leave water sufficient at the Ontario Power Company Works to permit of the production of $150.000 horse-power there. With a greater fall in the height of water at the Chippawa Works it is estimated that approximately double the amount of power can be recovered from water diverted there and discharged at Queenston as compared with the same quantity of water discharged at the Ontario Power Company Works. Any loss sustained by the Ontario Power Company by reason of diversion from its works of a portion of its water supply can under such conditions properly be measured against the value of additional power recovered therefrom at Chippawa.

Financial statements covering the accounts of the Niagara System:

(*a*) For the period between 1st November, 1911, and 31st October, 1917, and

(*b*) For the fiscal year ending 31st October. 1918.

are in the hands of the Honourable Peter Smith. Treasurer of the Province; and those for the fiscal year ending October 31st. 1919—and in detail—are complete and will be delivered to him within the next few days. For the greater portion of the period up to 31st October, 1917, the Sytem was in a state of initial development. but the progress made was substantial and, in my opinion, satisfactory.

For the fiscal year ending 31st October, 1918, the accounts of the System showed even better progress than for the preceding period. but some difficulties were met with in determining the exact results of the operations of the Ontario Power Company (which has been purchased as of date 1st August, 1917,) and the costs to be charged for power delivered to the Niagara System in that year were dependent to some extent on these results. In the accounts of the Ontario Power Company there was uncertainty as to the amounts which had to be set aside, as operating costs, to meet provisions for the renewal of plant and equipment and also as to the prices which the Power Company would be required to pay for power purchased by it in the year from the Toronto Power Company. These items were disposed of in the financial statement of the Ontario Power Company to 31st October. 1918, by the making of an interim allowance for renewals of plant and equipment until such time as information permitting correct calculation could be obtained: the prices to be paid to the Toronto Power Company for power being the subject matter of dispute and litigation allowances were included to cover them in amounts which the Commission believed to be amply sufficient to provide for all probable contingencies: on these bases the income of the Power Company appeared sufficient for the period between 1st August, 1917 and 31st October, 1918, to meet all operating costs to the Company and interest charges to the Commission. and to provide a surplus for sinking fund purposes. Accordingly the contract price of $9 per horse-power and $12 for other power. was charged to the Niagara System in respect of the power supplied to it by the Ontario Power Company in the year.

It is now possible to calculate with reasonable accuracy, what sums must be set aside annually to provide fully for renewals to plant and equipment of the Power Company. and with a recent settlement of litigation the price which must be paid for certain of the power purchased by the Company up to 31st October. 1918, can also be accurately ascertained: litigation still prevails, however, in respect of the price to be paid by the Company for other power taken in the same period. Adjusted to meet the now known facts as to costs for the period the accounts of the Power Company to 31st October. 1918, show that its income—after the charging of full provisions for renewals of plant and equipment—was deficient by upwards of from $230.000 to $370.000 (dependent upon how the litigation still in force shall be determined) to meet the costs of operating and interest and sinking fund on the purchase price of about $8.000.000 paid by the Commission for the Power Company. and if these amounts have to be provided. as the Power

Commission Act appears to demand, it will mean that they must be assessed as an additional cost of power over the prices already charged to the municipalities on the Niagara System for the period to 31st October, 1918.

The accounts of the Ontario Power Company for the fiscal year ending 31st October, 1919, will also show a deficit of between $255,000 and $335,000 (dependent upon how litigation still in force shall be determined) if full provision for renewals of plant and equipment be made and interest on the investment of the Commission and sinking fund to repay the same be taken into account; and if either of such amounts has to be provided it must be added to the cost of power supplied to the municipalities on the Niagara System in that period.

In addition, if the third pipe line to the works of the Ontario Power Company shall be removed within any short period of years, a still further and possibly substantial charge may require to be added to the costs of power in 1919 in order to meet the proportion of loss which would be chargeable to that year.

It is clearly apparent that the conditions under which the Ontario Power Company operated in the period to 31st October, 1919, were entirely abnormal and such are not likely to be again encountered. Under such circumstances and in view of the facts that —

(*a*) The Company must under a recent settlement of litigation and a judgment of Court—presently in appeal—pay prices for power purchased in the period which are greatly in excess of those which it charged for such power;

(*b*) War conditions were in force during part of the period, when the power so sold is said to have been employed largely for munition purposes;

(*c*) Provisions for renewal of equipment and plant (while absolutely necessary if the Ontario Power Company is to operate on a sound basis) do not represent actual cash outlays in the period;

(*d*) Sinking fund requirements, while part of the cost of power under the Power Commission Act, are in reality a capital repayment; and

(*e*) The third pipe line was installed to meet a pressing demand for power said to have arisen largely by reason of war conditions; I am firmly of the opinion that the interests of the Province and the municipalities will best be served by permitting the Company to forego charging provisions for renewal of plant and equipment as part of the cost of power delivered by the Ontario Power Company to the Niagara System in the period between 1st August, 1917, and 31st October, 1919. In addition, I believe it is essential that some basis shall be arrived at which will protect the Power Company in its investment in the third pipe line to its work so that it may avoid loss of any substantial portion of the same and be allowed to repay the cost over an extended period of years. If this can be done the income of the Ontario Power Company to 31st October, 1919, will have been all but sufficient to meet other requirements without any increased charge for power to the municipalities.

Prepared upon the basis that—

(*a*) The prices payable by the Niagara System to the Ontario Power Company shall be allowed to remain at $9 and $12 per horse-power for power delivered at Niagara Falls in the fiscal year ending 31st October, 1919, and

(*b*) The cost of the third pipe line to its works shall be repaid by the Ontario Power Company over an extended period of years, the results of operations of the Niagara System for the fiscal year ending 31st October, 1919, will be found to be satisfactory, from a financial standpoint, to a number of the municipalities and probably disappointing to others, including some of the most important of them. Rates paid by a number of the municipalities have been sufficient for the year to meet the full costs of power supplied to them and to provide a surplus; on the other hand shortage of power with higher expenses have so increased costs to others that the rates paid by them were insufficient to meet the same. Included in those which paid prices in excess of costs were:

*Sarnia,	over paid to the extent of	$10,929	(no sinking fund yet charged)	
New Toronto	do	10,707	do	do
Walkerville,	do	9,356	do	do
Windsor	do	8,816	do	do
London,	do	5,568	(after sinking fund was charged)	

Chatham,	do	5,362	(no sinking fund charged yet)
Tillsonburg,	do	3,222	(after sinking fund was charged)
Wallaceburg,	do	3,163	(no sinking fund yet charged)
Weston,	do	3,015	(after sinking fund was charged)

while of those which underpaid are:

Toronto, to the extent of.....		$106,854	(after sinking fund is charged)
Hamilton,	do	23,518	do do
London & Port Stanley Railway Commission, to the extent of		13,331	(no sinking fund yet charged)
Dundas,	do	4,558	(after sinking fund is charged)
Dunnville,	do	3,690	(no sinking fund yet charged
Galt,	do	1,988	(after sinking fund is charged)
Preston,	do	2,078	do do
Watford,	do	1,673	(no sinking fund yet charged)
Harriston,	do	1,046	do do

*Sinking fund is not chargeable until a municipal commission has been operating for 5 years.

An adequate supply of power available for distribution would, if the cost of it to the Com- shall not increase to an important extent, go a long way to remedy these conditions and serve to reduce costs to the municipalities. Arrangements are said to have been made for some increase in the supply of power, but until the amount distributed by the System shall increase to a substantial extent, it is possible that rates paid by some of the larger municipalities may require to be increased.

Sinking fund requirements are charged in the cost of power to all municipalities on the Niagara System where their municipal commissions have been in operation for a period of five years or more, and the state of the account of each municipality with the Commission will be fully set out in the accounts of the System to 31st October, 1919, which are shortly to be delivered to the Government.

Having regard to the above conditions it is my opinion that the position of the Niagara System was completely sound on the basis on which the undertaking was started, at which time the Commission purchased power at definite prices and distributed it to the municipalities, which in turn had to pay the costs of the same. The purchase of the Ontario Power Company, construction—entered upon—of the Chippawa Works, and installation of the third pipe line to the works of the Ontario Power Company, were all departures from this basis in that they have made the municipalities responsible for the costs of generation of the power supply of the System. The financial success of the Niagara System being based upon its ability to supply power to the municipalities at moderate prices, its future, therefore, is now largely dependent upon the prices which must be paid for Chippawa power when such works shall be complete and in operation. Power will be supplied to the municipalities at reasonable rates if the costs of construction and operation of the Chippawa Works shall not be excessive when compared with the amount of power which the Commission is able to generate and sell from such works. On the other hand, if the costs of construction and operation of the Chippawa Works shall prove to be excessive when compared with the amount of power which the Commission is able to develop and sell from such works, then the municipalities will have to pay such increased prices for power as will reimburse the Commission in all the costs to which it shall be put in the connection.

Until the Chippawa Works be complete and their costs of construction and operation known, such costs and the amount of power which they will generate are matters which engineers alone can estimate; the amount of power which will be sold from them is also a matter for the future to determine, although no apprehension is felt by the Commission in the connection; accordingly I am in no position at this time to make any statement to you as to what the cost of Chippawa power will be to the municipalities. The Commission is of the opinion, however, that it will be able to complete and operate the Chippawa Works so that the average cost of power at Niagara Falls will be about $12 per horse-power, and if such shall be the case it should be satisfactory to the municipalities. An adequate supply of power at even higher prices

will, in my opinion, be of advantage to the municipalities when compared with the present high cost of steam power.

2. *Severn System.*

The investment of the Commission in the Severn System which develops and supplies power to 17 municipalities adjacent to and including Midland, Penetang and Collingwood, amounted to $1,349,000 on October 31st, 1919.

The income of the System for the fiscal year ending October 31st, 1918, was $158,819, while the costs of operation of the System for the same period—and including $3,758 charged on sinking fund account—were $147,832. The net surplus for the year, was, therefore, $10,986, attributable to over-payments for power by certain municipalities to the extent of $17,358, as against which certain other of the municipalities underpaid for power in the amount of $6,372.

For the fiscal year ending October 31st, 1919, the income of the System amounted to $158,965, while the expenditures including $12,716 for sinking fund amounted to $203,392, the underpayments of $44,426 being attributable to the fact that the prices paid for power by all of the municipalities were, with increased expenses of operating, insufficient to reimburse the Commission in the cost of the same.

In my opinion the financial position of the System is sound in that if increased costs of operating continue they can be met by an addition to the prices charged for power.

3. *St. Lawrence System.*

The St. Lawrence System purchases power and supplies it to 5 municipalities, including Brockville, Prescott, Chesterville, Williamsburg and Winchester, and the investment of the Commission in it to October 31st, 1919, was $513,666.

The income of the System for the year to October 31st, 1918, was $22,666, as against which costs of operation—excluding any charges for sinking fund— amounted to $27,744. The excess of expenditures over receipts of $5,077 was attributable to the fact that 4 municipalities underpaid for power to the extent of $5,436, while 1 municipality overpaid by $359.

For the fiscal year ending October 31st, 1919, the income of the System was $49,049, while the costs of operation—excluding any charges for sinking fund—amounted to $55,128, leaving an excess of expenditures over receipts of approximately $6,079; this was attributable to underpayments for power to the extent of $5,288 by 4 of the municipalities, and overpayments of $324 by 1 municipality; in addition $1,115 loss was made on the supply of power to certain private customers.

To October 31st, 1919, the System as a whole was in arrears in respect of amounts owing to the Commission for power to the extent of about $27,130. Sinking fund payments stood deferred, under the Act, for the reason that none of the municipal commissions had been operating for a full period of five years.

The System has suffered from the fact that it has had an inadequate supply of power, and because the amount of power distributed to the municipalities has been insufficient to reduce expenses to a reasonable basis. The Commission has made an arrangement for an increased supply of power and during the last fiscal year expended approximately $160,000 on extensions, partly for the purpose of obtaining new customers. The extended supply and sale of power will undoubtedly improve the position of certain of the municipalities but underpayment of costs will probably continue with others unless their present rates of consumption of power shall be increased or the rates charged to them for power shall be raised.

4. *Wasdell System.*

The Wasdell System develops and supplies power to the municipalities of Beaverton, Cannington, Sunderland, Brechin and Woodville, and the investment of the Commission in it to October 31st, 1919, was $273,464.

For the fiscal year ending October 31st, 1918, the income of the System was $20,107, including $9,125 paid by the Severn System for power supplied to it. The expenses of the System for the same period were $29,100—exclusive of any provisions for sinking fund—and the excess of expenditures over receipts of $8,993 was attributable to the fact that none of the 5 municipalities on the System paid the complete cost of power supplied to them.

For the fiscal year ending October 31st, 1919, the income of the System was $29,234, including $15,509 paid to it for power taken by the Severn System; expenditures in the same

period amounted to $31,724—exclusive of any provisions for sinking fund—and the excess of expenditures over receipts of $2,490 was attributable to the fact that none of the municipalities on the System paid the full cost of power to the Commission.

To October 31st, 1919, the 5 municipalities, comprising the System, were indebted to the Commission to the extent of $39,231 in respect of underpayments for power supplied to them during the period of operation of the System. Sinking fund payments stood deferred under the Act for the reason that none of the municipal commissions had been in operation for the full period of five years.

The amount of power taken by the municipalities on the System has been inadequate, as compared with the investment of the Commission in it, to reduce costs and to allow the System to furnish power at the prices expected. Relief has, however, been given to the System through power taken and paid for by the Severn System. If the amount of power taken by the Severn System shall be increased it will help to overcome underpayments by the municipalities, but it is probable that the prices paid for power by the municipalities will require to be raised over the rates now charged if the System is to make good the amount due to the Commission and be put on a proper financial footing.

5. *Eugenia System.*

The Eugenia System develops and supplies power to 18 municipalities in the vicinity of and including Chesley, Mount Forest and Orangeville. The investment of the Commission in the System amounted to $1,664,500 on October 31st, 1919.

For the fiscal year ending October 31st, 1918, the income of the System from the municipalities was $77,854, while in addition, $48,387 was paid to it by private companies and the Severn System for power supplied to them—the total income being $126,241. Expenditures for the period amounted to $117,147—exclusive of any provision for sinking fund—and the surplus of $9,094 was attributable to overpayments for power by certain municipalities to the amount of $15,059 and underpayments by others to the amount of $5,965.

For the fiscal year ending October 31st, 1919, the income of the System was $132,697, including $84,858 collected from municipalities and $47,839 paid to the System by certain companies and the Severn System for power supplied to them. Expenditures in the period amounted to $141,156, exclusive of any provisions for sinking fund—and the excess of expenditures over receipts of $8,459 was attributable to the fact that 15 municipalities underpaid for power in the year by $13,276, while 3 municipalities overpaid by $4,817.

To October 31st, 1919, 15 municipalities were indebted to the Commission in $49,755 for power supplied to them and not completely paid for, while the accumulated amount to the credit of 3 other municipalities for amounts paid to the Commission in excess of the cost of power was $15,032. Sinking fund payments stood deferred under the Act for the reason that none of the municipal commissions had been in operation for the full period of five years.

In my opinion the System is on a sound financial basis, but with recent increased costs of operating and in order to wipe out deficits the rates charged to certain of the municipalities will require to be increased.

6. *Ottawa System.*

The investment of the Commission in the Ottawa System is very slight, being $1,009, and the System buys and sells power to the local Hydro-Electric Commission at exact cost.

7. *Muskoka System.*

The Muskoka System generates and supplies power to the Towns of Huntsville and Gravenhurst, and the investment of the Commission in it to October 31st, 1919, was $203,137.

The income of the System for the fiscal year ending October 31st, 1918, was $19,118, as against which the costs of operating—without inclusion of any provision for sinking fund—were $23,798, the excess of expenditures over receipts of $4,680 being attributable to the fact that neither of the municipalities taking power paid the full costs of the same.

For the fiscal year ending October 31st, 1919, the income of the System was $24,654, while expenditures—without inclusion of any provision for sinking fund—amounted to $27,123, the excess of expenditures of $2,469 being attributable to the fact that neither of the municipalities paid the full cost of power to the Commission.

To October 31st, 1919, the two municipalities were indebted to the Commission in $11,680, in respect of accumulated underpayments for power. Sinking fund payments stood deferred under the Act as neither of the municipal commissions had been in operation for the full period of five years.

Inasmuch as the municipalities are fully responsible for the costs of power and to meet the debt of $11,680 due by them to the Commission, there is no reason to question the financial position of the System. On the other hand, unless the consumption of power shall be largely extended an increase will require to be made in the rates now being charged the municipalities for power.

8. *Rideau System.*

The Rideau System commenced operations about November 1st, 1918, and it generates and supplies power to Smith's Falls, Perth and Carleton Place; the investment of the Commission in it to October 31st, 1919, was $681,467, of which approximately $530,000 was expended during the last fiscal year.

The income of the System to October 31st, 1919, amounted to $29,623, while expenditures —without inclusion of any provisions for sinking fund—were $27,351, the surplus of $2,272 being attributable to the fact that two of the municipalities paid $3,991 in excess of the cost to them of power, while one underpaid to the extent of $1,719.

The Rideau System has been in operation for one year only.

9. *Thunder Bay System.*

This is a System which at present buys power and sells it to the City of Port Arthur, and to October 31st, 1918, the investment of the Commission in it was $127,299.

For the fiscal year ending October 31st, 1918, the income of the System from the City of Port Arthur was $82,753, as against which expenses—including $1,972 provision for sinking fund—were $77,550. The amounts paid to the Commission in the year were, therefore, $5,203 in excess of the cost of power.

In the fiscal year ending October 31st, 1919, the income of the System amounted to $96,374 as against which expenditures—including $2,116 for sinking fund purposes—were $88,420, the surplus being $7,950, attributable to overpayments by the City of Port Arthur for power.

To October 31st, 1919, the City of Port Arthur had met all annual provisions for sinking fund and also overpaid the Commission for power to the extent of $17,622.

During 1919 construction was started by the Commission of a power development on the Nipigon River for a supply of power to the municipalities of Port Arthur and Fort William and to other customers with whom contracts have yet to be concluded. The cost of this development will, as estimated by the Commission's Engineers, be between $4,000,000 and $5,000,000, of which approximately $1,000,000 has been expended to date. The Commission is engaged in negotiations looking to the sale to pulp mills and paper companies of a large portion of the power to be generated by the development and the future of the System is dependent to a great degree upon its ability to dispose of such power at adequate prices.

10. *Essex System.*

The Essex System was purchased by the Commission on June 1st, 1918, under the provision of section 8, subsection "A," of the Power Commission Act, which permits the Commission, with the approval of the Lieutenant-Governor in Council, to acquire by purchase, lease or otherwise, works, machinery and plant of any person owning, holding or operating the same for generating electrical power or energy, or for the transmission thereof in Ontario. The price paid for the undertaking was $226,000 in debentures of the Commission guaranteed by the Province of Ontario.

The Essex System buys power from the Niagara System and distributes and sells it largely to private and other customers—not municipalities—in Leamington, Kingsville, Essex, Harrow, Amherstburg, Kinneard River and Cottam, all in the County of Essex. The position of the Essex System is entirely different from that of any other system in that it is owned by the Commission, and no municipalities or any customers are under the responsibility for the results of operation, or to repay the cost of the System. It is stated that the Commission intends to put the System upon a Hydro municipal basis, but so far this has not been done.

In the period between June 1st, 1918, and October 31st, 1919, the Commission expended $147,721 upon the System, increasing its investment in it to $373.721 as of October 31, 1919.

For the five months to October 31st, 1918, the income of the System was $17,813, while expenditures amounted—with inclusion of $1,779 as provision for sinking fund and a high cost for steam generated power—to $30.500. This left an operating deficit of $12.687.

For the fiscal year ending October 31st, 1919, the income of the System from sales of power and profits on sales of supplies, amounted to about $56,677, as against which expenditures—with $4.269 provided for sinking fund—amounted to $75.726; this left a deficiency for the period of $10,049.

To October 31st, 1919, the System was indebted to the Commission in approximately $31,737 for the excess of costs of operation over income, and no municipalities or customers are responsible for repayment of the same. Of this amount the Commission has evidently looked to lose some portion, in the expectation that the System would later get upon its feet and repay it.

The position of the Essex System is, in my opinion, unsatisfactory from the standpoint of the Province in that it is at present being operated at the risk of the Province.

11. *Thorold System.*

The Thorold System is a system of lines over which power is transmitted by the Niagara System to customers of what was formerly known as the "Battle" System, in the vicinity of Thorold.

The Thorold System was purchased on December 1st, 1918, at a price of $100.000 paid in four per cent. forty year bonds of the Commission, guaranteed by the Province. The lines purchased are said to have a physical value of about $27,500; approximately $57.500 was paid as the then present value of commissions which will become due by the Ontario Power Company on contracts for the supply of power to customers in the Thorold district, about $15,000 was paid as the value of future profits on certain existing contracts with sundry customers for power and as the value of unsold power to which the System was entitled under contracts with the Ontario Power Company.

For the period of eleven months to October 31st, 1919, and after provision of $1,758 on sinking fund account, the operation of the System returned a surplus of $4.392, a part or the whole of which must be applied in the reduction of the purchase price paid for the System.

12. *Monteith System.*

The Monteith System owns a power development on the Driftwood River. Temiskaming District and a distribution system in the Village of Monteith, the construction of which was undertaken by the Commission under instructions from the Department of Agriculture for the Province of Ontario and for the purposes of Soldiers' Re-establishment. No contract has as yet been signed between the Department and the Commission, but it is stated that the Department is to operate the plant and distribution system and make payment to the Commission annually of such amounts as will be sufficient to meet interest and form a sinking fund to repay capital cost within thirty years. The investment of the Commission in the System to October 31st, 1919, was $23,753. The Department of Agriculture has to this point paid the costs of operation of the Monteith System, but is indebted to the Commission in $3.405 in respect of sinking fund provisions and interest for the period up to October 31st, 1919.

13. *Ontario Power Company, and its subsidiary, The Ontario Transmission Company Limited.*

The Ontario Power Company owns an Hydraulic Power Development plant at Niagara Falls, Ontario, with transmission and other lines necessary thereto, and the rated capacity of the plant at the date of purchase of the Company by the Commission as on 1st August, 1917, was about 160.000 horse-power.

As of such date the Ontario Power Company had the following securities outstanding:

Capital Stock	$10.000.000
1st Mortgage 5% Gold Bonds, due 1st February, 1943	9.826.000
2nd Mortgage 6% Debentures, due 1st July, 1921	2.841.700

while the Ontario Transmission Company, Limited (the whole of whose capital stock is owned by the Ontario Power Company), had these securities outstanding, namely:

Capital Stock	$1.000.000
1st Mortgage 5% Gold Bonds, due 1st May, 1945	1,769.000

The mortgage indebtedness of the two companies at the time of purchase was, therefore, $14,436,700.

The price paid by the Commission for the capital stock of the Ontario Power Company was 80 per cent. of the par value of such stock in 40 year 4 per cent. bonds of the Commission, guaranteed by the Province, and the amount of such bonds now outstanding is $7,994,900; for these the Commission has obtained $9,993,700 of capital stock of the Power Company. There is in the hands of the public, therefore, not more than $6,300 par value of the capital stock in the Ontario Power Company.

Under the provisions of section 22 and 23 of the Power Commission Act the municipalities on the Niagara System are, as I am advised, responsible for the costs of operation of the Ontario Power Company and to repay the investment of the Commission in the shares of the Company.

At the date of purchase by the Commission, the Ontario Power Company had three contracts with the Toronto Power Company for the supply of power to it; one of these contracts expired on 5th September, 1917, the second expired on 1st November, 1917, and the third continues in force until 5th October, 1920. With the expiry of the second contract the Toronto Power Company was ordered by the Dominion Power Controller to continue a supply of power—equal in amount to that required by the contract—to the Ontario Power Company. The Ontario Power Company sold the power supplied by the Toronto Power Company on the assumption that it would be required to pay about $13 per horse power for it, but later on disputes and litigation arose between the Toronto Power Company and the Ontario Power Company with respect to the prices to be paid. In the settlement of one dispute and under a judgment of Court, now in appeal, with respect to another, the Ontario Power Company may be required to pay between $425.000 and $450.000 more than the amount which it expected for power so sold up to 31st October, 1919.

As a result of these conditions the income of the Ontario Power Company for the period up to 31st October 1919, was insufficient—if full provisions for the renewal of plant and equipment be included—to meet all operating expenses, and pay about $400,000 per annum, being interest and sinking fund on the investment of the Commission. If such deficits have to be made good in the periods in which they occurred, then the municipalities on the Niagara System will require to be assessed further for the cost of power in the fiscal years 1918 and 1919. These conditions are fully dealt with in my report on the Niagara System and I have recommended that provisions for renewal of plant and equipment shall be waived for the periods, in which event an increase in the price of power to the municipalities—and for such periods—will not be necessary.

In 1918 the Commission commenced the construction of a third pipe line to the works of the Ontario Power Company for the purpose of obtaining an additional supply of 50,000 horsepower, and it was estimated that the cost of such pipe line, together with the necessary electrical equipment, would be between $1.500,000 and $2,000,000, and further that the amounts recovered from sale of such power, with indemnities looked to be received from the Dominion Government, would be sufficient before the spring of 1923 to repay, largely, if not wholly, the cost of the pipe line. The Ontario Power Company accordingly signed a contract in which it agrees to remove the pipe line by the spring of 1923. The Commission now states that the Queen Victoria Niagara Falls Park Commission has agreed to allow the pipe line to remain for as long a period as it shall be required by the Power Company if certain improvements be made. The pipe line and necessary electrical equipment have cost $3,510,000, and coming into operation in about June, 1919, it is probable that the Ontario Power Company will not likely be able to remove the pipe line within any limited period of years except at a loss, and if this loss has to be measured against the cost of power produced between June, 1919, and any date of removal, within a limited period, it would mean an addition—greater or less as the case may be—to the cost of power. It is impossible at this date to determine what such a loss or the consequent addition to the cost of power would be. Under these circumstances it seems to me to be very necessary that the Ontario Power Company shall be protected in its investment in the pipe line and that the line be allowed to remain permanently as a part of its works; also that the Company be allowed to repay the cost of the same over an extended period of years. Indications are that the

amount of water presently available will not be sufficient to operate the works of the Ontario Power Company to full present capacity and at the same time operate the Chippawa works to the full extent of the ultimate development proposed. The Commission accordingly proposes to divert 3,500 second feet of water from the Ontario Power Company works, and this, with other water said to be available, will, in its opinion, be sufficient to produce 275,000 horse-power from the initial development at Chippawa. With a greater fall in the height of water at the Chippawa works it is estimated that approximately double the amount of power can be obtained from water diverted there and discharged at Queenston as compared with the same quantity of water discharged at the Ontario Power Company works. Accordingly any loss met by the Ontario Power Company by reason of diversion of any part of its water supply can under such conditions be properly measured against the value of additional power recovered therefrom at Chippawa.

On 1st July, 1921, approximately $2,700,000 of second mortgage bonds of the Ontario Power Company will mature, when they will require to be provided for—in all probability by the Province. The annual sinking fund payments of $225,000 per annum above mentioned, are the amounts which are required to be paid under existing mortgage agreements, but such sums will be inadequate to repay the outstanding indebtedness of the Companies at maturity of the bonds.

14. *Bonnechere Water Storage System.*

This is a small water storage system near the Town of Renfrew which has cost about $31,000, and the Commission is entitled under the Act to charge such rates for water taken from it by consumers as will pay costs of operating, interest and sinking fund. With difficulties met with in obtaining payment of such rates the position of the System cannot be described as wholly satisfactory.

15. *Central Ontario System.*

Under an agreement dated 10th March, 1916, and made between the Electric Power Company, Limited, and the Province of Ontario, the Government purchased the undertaking known as the Central Ontario System, for the sum of $8,350,000, payable in debentures of the Province maturing 1st March, 1926, and bearing interest at the rate of 4 per cent per annum. Later by Order-in-Council dated 5th May, 1916, administration and management of the System was vested in the Hydro-Electric Power Commission of Ontario.

The Central Ontario System is divided into two sections. One is known as the Central Ontario section, which controls and generates power at several points on the Trent River, transmits such power over lines which it owns and distributes it to local public utility plants—also owned by the System—in a number of municipalities including Belleville, Brighton, Cobourg, Deseronto, Lindsay, Napanee, Oshawa, Port Hope, Peterboro, Trenton and Tweed; it also sells power to a number of other municipalities and customers. The System owns gas works at Cobourg, Napanee and Peterboro; water works at Cobourg and Trenton (since sold), and the Peterboro Street Railway. In addition, it operates a pulp mill at Campbellford and owns the Bruton Township timber limits purchased by the Province to provide a supply of wood for the pulp mill.

The Northern Ontario Section has a power development at Nipissing, near North Bay, and supplies power to local public utility undertakings owned by the System in North Bay, Powassan, Nipissing and Callander.

Prior to purchase of the undertaking by the Province, and in 1914, the physical assets of the System were appraised by Engineers of the Commission and upon the basis of such appraisal the value of such physical assets at the time of purchase was set at $5,672,658, and the remainder of the purchase price, $2,677,342, was allocated as the price paid for water rights, franchises and other assets of an intangible and non-income returning nature.

The results of operation of the System have not to this point been very encouraging, but on the contrary, after making full provision for the renewal of works and payment of interest at 4 per cent. per annum on the purchase price—and at current rates on further advances—but without any allowance for repayment of the investment or advances of the Province:

(*a*) Interest costs and expenses of operation exceeded the income of the System to October 31st, 1917, by $24,218.75;

(*b*) Income exceeded interest costs and expenses of operation of the System for the fiscal year ending October 31st, 1918, by $16,500; and

(*c*) Interest costs and expenses of operation exceeded the income of the System for the fiscal year ending October 31st, 1919, by $183,632.

These results were attributable in part to the fact that interest to the amount of approximately $107,000 per annum has had to be paid on the purchase price of intangible and non-income bearing assets.

The Gas and Water Works and the Peterboro Street Railway have consistently shown losses and in 1918 and 1919 operations in the Pulp mill also produced deficits, but at present the Pulp mill is said to be producing substantial profits. With the interest charges in respect of water power rights and intangible assets, to a large extent assumed by the Power Department, the prices allowed to it, for power generated, have for the most part been insufficient to meet costs —on the other hand the electrical utilities, supplied with power at such prices, have in most cases shown profits.

With the completion of the Ranney's Falls development—now contemplated to be constructed—and an increased amount of power made available to meet demands, the Commission believes that these conditions will be much improved.

In 1926 $8.350,000 debentures, given by the Province as the purchase price of the undertaking, will mature. At that time costs chargeable annually against the System will increase if a rate of interest higher than 4 per cent. per annum has to be paid with their renewal.

Since the date of purchase the Province has advanced $2,893.185 to the System in cash, but of this amount the Hydro-Electric Commission has borrowed $1.209.787 for the purposes of other Systems. In addition, there are outstanding debentures of the Province in the amount of $225,000 given on account of the purchase of the Bruton Township timber limit which was acquired for the supply of the Pulp mill.

On the whole I regard the present position of the Central Ontario System as unsatisfactory from the standpoint of the Province, and would advise, when it be found possible to do so, and in a manner fair and equitable to the Province and the municipalities, that it be put upon a Hydro Municipal basis. As their operation is also entirely foreign to an undertaking of the character of the Central Ontario System, it is my opinion that the Pulp mill and Bruton Township timber limit should be disposed of at the first favourable opportunity. Steps to this end are, I understand, now being taken.

16. *Ontario Niagara Development Works (Chippawa Power Canal.)*

The position of these works is dealt with in my report upon the Niagara System. The works are in course of construction and estimates of Engineers of the Commission are alone available to indicate what their costs of construction, or the cost of power when delivered from them, will be. Accordingly I can, as Auditor, make no statement upon the subject. Expenditures to date upon the Canal amount to about $18.500.000.

17. *Hydro-Electric Railway Lines.*

Under the provisions of the Hydro -Electric Railway Act, 1914, and amendments thereto, the Commission is authorized to enter upon the construction or purchase and operation of electric railway lines when and so soon as

(*a*) The Lieutenant-Governor in Council shall have authorized the municipalities interested to enter into agreements with the Commission for the construction and operation of any electric railway line; and

(*b*) The municipalities interested shall, in respect of any proposed line, have signed agreements containing terms and conditions laid down by the Act, including the assumption on their part of liability for the costs of construction and operation of such a line in proportions agreed upon.

Under section 6 of the Act it is provided that the Commission may raise money for the construction and equipment of such a railway line by the issue of bonds secured upon the railway and all assets belonging thereto, and further, that it may from time to time increase the amount of the bonds so to be issued by any amount which it deems necessary to cover the costs of construction and equipment or to provide for extensions or improvements to the line.

Under section 7 of the Act it is provided that neither the Province nor the Commission shall be liable for the payment of the bonds to be issued by the Commission except to the extent of the moneys which shall be received in connection with the operation of the railway line or from the sale of debentures to be deposited with the Commission by the municipalities. Under section 8 of the Act, however, it is provided that the Lieutenant-Governor in Council may authorize the Treasurer of the Province of Ontario to guarantee the payment of the bonds issued by the Commission. There is almost a certainty that the bonds so to be issued in respect of any radial line cannot be sold by the Commission to advantage without the guarantee of the Province.

The municipalities on their part are required to deposit debentures to the amount of their respective shares of the costs of construction and equipment of the railway line with the Commission and these debentures are to be held by the Commission as collateral security for the bonds issued by it, subject to the right on its part to sell or dispose of so much of them as may be necessary at any time to meet the payment of any amounts due by a municipality in default.

The agreements with the municipalities are very rigid in character in that the responsibilities assumed by each municipality are based upon the costs of construction and operation of a line, the exact location and character of which is definitely laid down in each agreement. Legal opinion is that there is doubt as to whether the obligations assumed by any municipality can be enforced in the event that a line shall be constructed and operated for a portion only of the distance prescribed in the agreement to which such municipality is a party; this is particularly the case if the portion constructed becomes a defined part of a new system comprised of the part of one system and the part or the whole of another system, leaving any part of either of the original systems unconstructed.

The Commission has in contemplation the construction or purchase and operation of these lines, namely:

(*a*) The Port Credit to St. Catharines Line, to run between the Village of Port Credit and the City of St. Catharines.

(*b*) The Toronto to Port Credit to London line to run between the City of Toronto to the Village of Port Credit and the City of London.

(*c*) The Toronto and Eastern line, to run from the City of Toronto to the Town of Bowmanville.

Necessary agreements have been executed with the municipalities in respect of the Port Credit to St. Catharines line, and such agreements have been approved of by the Lieutenant-Governor in Council. Agreements have been voted upon by the municipalities interested in the Toronto to Port Credit to London line, but the same have to be signed, I am informed, by the municipalities between Toronto and Port Credit only. Agreements with the municipalities in respect of the Toronto Eastern line have been executed and the approval of the Lieutenant-Governor in Council thereto has been obtaind.

Costs of construction and purchase of the Port Credit to St. Catharines line are estimated by Engineers of the Commission at $11.000,000, which amount it is proposed to raise when and as required by sale of bonds of the Commission. Certain of these bonds have already been guaranteed by the Province and are in the hands of the Commission. The Commission has entered upon certain obligations in connection with the acquisition of right of way and for supplies and materials, and these obligations amount to upwards of between $250.000 and $300.000.

In order to provide for connection of the Port Credit to St. Catharines line with the City of Toronto, the Commission has made expenditures and incurred liabilities to the amount of upwards of $650.000, and it states that these expenditures have been made as part of the costs of construction and purchase of the proposed Toronto to Port Credit to London line, in respect of which it intends to apply for legislation authorizing it to construct and operate the same in two divisions to be located between Toronto and Port Credit and Port Credit and London. Agreements have been executed by the municipalities between Toronto and Port Credit but not by those between Port Credit and London; accordingly the terms of the Hydro-Electric Railway Act have not as yet been complied with in respect of the Toronto to Port Credit to London line as voted on by the municipalities. The Commission states that it received assurances from Sir

William Hearst, when Premier of Ontario, that if it would obtain resolutions by the municipalities interested requesting the Government to introduce and pass amendments to existing legislation that may be necessary to validate the building of the Toronto to Port Credit section as a part of the Toronto to St. Catharines Hydro-Electric Railway (so as to make the same legal, valid and binding upon the municipalities), that the Government would with the presentation to it of such resolutions support legislation to that effect. In such event Sir William Hearst is said to have expressed the opinion that no difficulty would be met with in carrying out the wishes of the Commission to have the bonds necessary for the construction and equipment of such line guaranteed by the Province. On the basis of these assurances, therefore, and with resolutions by the municipalities in its possession, the Commission, although without statutory authority to do so, has felt justified in making expenditures amounting to $550.000 out of the funds held by it under the terms of The Power Commission Act, in the belief that by so doing it would make a considerable saving in the cost of the Toronto to Port Credit line. Engineers of the Commission estimate that the cost of construction of the Toronto to Port Credit line will be upwards of $5,000.000 to $6.000.000.

Estimates of the Engineers of the Commission indicate that the cost of construction of the Toronto and Eastern line will be about $9.000.000, to be raised as and when required by sale or issue of bonds of the Commission guaranteed by the Province. The approval of the Lieutenant-Governor in Council to the agreements with the municipalities has been obtained, and expenditures upon the line to this date amount to about $10,000.

As the costs of construction or purchase and operation of the above mentioned electric railway lines are matters which engineers alone can estimate at this time, I am unable to make any further statement to you with reference to them. Engineers of the Commission are of the opinion, however, that the revenues of such lines will be sufficient to meet costs of operation.

Moneys necessary to be provided by the Province in respect of construction under way and to meet liabilities of Commission.

The amount of money which the Province must provide in order to meet the costs of completing works under construction by the Commission cannot be determined with accuracy until such works be completed, but statements of the Commission and estimates of its engineers indicate that in their opinion it will be approximately as follows:

Estimated costs of construction of Chippawa Works	$40,000,000	
Less—expended thereupon	18.500.000	
		$21.500.000
Estimated costs of construction of Nipigon Works	4-5.000.000	
Less—expended thereupon	1,000,000	
		3-4.000.000
Estimated amount to be expended on Rideau Systems		350,000
On other systems		150,000
If the same progress be made by Commission in the next two years as in recent periods, it is my opinion that expenditures, outside of those above mentioned, will require to be made of not less than		1.000.000
A total of		$26.000.000 to $27 000.000

and the probability is that these amounts will have to be advanced in cash by the Province within the next 18 to 24 months.

In addition to the above, $2.700.000 of second mortgage bonds of the Ontario Power Company will mature in 1921 and they must be provided for. The Commission is indebted to its bankers in $1.000.000—repayment of which is guaranteed by the Province—for moneys advanced to the Ontario Power Company: sales of power are expected to provide funds for repayment of this debt, but in the event that they shall not do so the Province may require to advance to meet the whole or some part of it. Should either of these amounts have to be provided by the Province—by way of cash or guarantees—the Ontario Power Company will—and is able to—pay interest and sinking fund upon the same.

In the event that the Commission shall proceed with the construction and purchase of the Hydro-Electric Railway lines hereinbefore mentioned upwards of $25.000.000 to $26.000.000

will, in the opinion of Engineers of the Commission, require to be paid in connection with them. The amounts will, it is contemplated, be provided when and as required—by sale or issue of bonds of the Commission guaranteed by the Province.

In your letter you state that the Government is sympathetic to the Commission and you request me to express my opinion as to whether there are any reasons why support cannot be continued and extended to the Commission with benefit to the municipalities and the Province. In reply thereto I beg to report that there is, in my opinion, every reason to justify the Government in according a full measure of support to the Commission in its efforts to develop and utilize the power resources of this Province, particularly in view of the heavy advances in the cost of coal and other fuel which have taken place in the last year or two and the further increases which appear likely to occur in the near future. In providing such support to the Commission, however, there are, in my opinion, certain conditions to which the Province must pay regard and to which the Commission and the municipalities should also give attention in their own interests.

The most pressing matter is the ability of the Province to raise funds under present conditions for its own requirements and the purpose of other developments in view and at the same time continue to extend credits to the Commission so as to permit it to enter upon projects of magnitude. At the present time the debt of the Province is about $100,000,000, of which approximately $40,000,000 has been advanced in cash and securities to the Commission while $10,000,000 in cash and securities, has been paid for the purchase and use of the Central Ontario System which is owned by the Province and operated on its behalf by the Commission. The Province has, in addition, guaranteed other securities to the amount of about $8,300,000 to permit the Commission to purchase the Ontario Power Company and certain other minor properties. Sinking funds payable by the municipalities having been deferred under the terms of the Power Commission Act for a period of five years after the date when each municipal commission first commences operating, the Province has to this point received about $535,000 in reduction of these advances. Based upon estimates of the Commission and its Engineers upwards of $29,000,000 will now be required from the Province in cash within the next two years to complete works in course of construction and meet maturing liabilities, while a further $25,000,000 to $26,000,000 may require to be provided by the sale or issue of bonds of the Commission—guaranteed by the Province—for the purposes of Hydro-Electric Railway lines. With present abnormal costs it is stated that the Commission may find it to be against the interests of the municipalities to proceed too rapidly with construction work on such Hydro-Electric Railway lines, as to do otherwise may impose serious burdens for the future. In that event the sale or issue of the $25,000,000 to $26,000,000 of bonds mentioned may be effected gradually and as conditions warrant. In any event, however, the total amount now in contemplation to be provided on the credit of the Province (subject to the guarantee of the municipalities) is upwards of $55,000,000 or an amount in excess of one-half of the present debt of the Province. With such expenditures made upwards of $105,000,000 will stand invested in Hydro-Electric enterprises and the Central Ontario System, and of this amount approximately $65,000,000 will be represented by undertakings, the exact costs of construction and operation of which are still matters for the future to determine.

At the present time Canadian securities cannot be sold in the United States except at excessive rates, unless principal and interest be made payable there, which, of course, means that exchange would have to be paid on interest and principal payments as they fall due: the sale of new securities in England is out of the question. Accordingly, the probability is that a large proportion of the moneys now necessary for the purposes of the Commission may have to be borrowed in Canada. There can be no objection to this course if the Province is prepared to pay the rates of interest demanded. Money markets are not unlimited under present conditions, however, but they are more restricted than they have been in years. It is, therefore, necessary, so far as the Province is concerned, that it does not put too great a strain upon them if its high present grade of credit is to remain unimpaired and it is to continue able to borrow money without payment of too high a rate of interest.

Under the above conditions and if the Province is to be left in the position where it can support the Commission in a proper manner and still provide for its other requirements at

reasonable interest costs, it is essential, in my opinion, that there shall be the most complete confidence between the Government and the Commission to the end that new projects shall not be entered upon—or substantial additions—beyond those of immediate necessity—be made to existing undertakings, without a complete and frank understanding in respect to each of them. Before new projects be entered upon, also, the Government should, in fairness to the Province, the Commission and the municipalities, fully satisfy itself that they are based upon such business principles as will ensure that its guarantees are not likely to be called upon; at the same time moneys necessary for the purpose should be financed before construction of such work be commenced or their purchase undertaken.

Moneys raised by the Province for the purposes of any Department of the Government or for the Commission cannot, under the Audit Act, be paid over without a vote of the Legislature, and when so voted they are strictly limited in amount. Under the Acts regulating its powers the Commission has authority to issue bonds and the Treasurer of the Province is empowered, subject to the approval of the Lieutenant-Governor in Council, to guarantee the same, but no limitations are imposed in the Acts with respect to the aggregate amount of bonds which the Commission may issue or the Treasurer of the Province guarantee, with the approval of the Lieutenant-Governor in Council. As the liability of the Province is the same to all intents and purposes whether it raises moneys direct or guarantees bonds of any undertaking, in that it must see that payment of all borrowings or guaranteed bonds be made, it is a matter worthy to be considered as to whether the Legislature should have direct control over all the finances of the Province or the Treasurer of Ontario remain vested with authority to guarantee bonds with the approval of the Lieutenant-Governor in Council.

When the Hydro municipal scheme was first put into operation the costs of construction were, comparatively speaking moderate, and interest rates 4 per cent. per annum. Now costs of construction are nearly double what they were and difficult to estimate for any extended period of time in advance. Interest rates are also about 6 per cent. per annum, or—on a double cost—about three times as much per horse-power as before. Where purchases be effected by the issue of 4 per cent. bonds also, the difference between 4 per cent. and market rates of interest must be met by the issue of an increased amount of bonds to cover the same. If it be believed that the present costs of construction are permanent and that they will not recede in the future, then attention need not be paid to these conditions; on the other hand if it be believed that the costs of construction will be lower in the future—as is generally expected—it would seem to be the part of wisdom not to enter upon construction of any new works at the present time except those of the most pressing and immediate necessity, unless the municipalities interested are, with a full understanding of what they mean, willing to accept the burdens imposed and bear them for a period of from thirty to forty years.

Unexpected increases in costs of operation met with subsequent to the dates when adjustments of rates were made were responsible to a considerable degree for under-payments for power by many of the municipalities in the fiscal year ending October 31st, 1919. Under these circumstances I attach but little importance to many of such under-payments which can readily be made good by increases in rates. It is apparent, however, that higher rates must now be paid by many of the municipalities, but with their payment most substantial advantages will still remain to the municipalities if such rates be compared with the present extremely high costs of steam generated power.

With due regard to the above conditions I can see no reason why full support of the Commission should not be continued by the Province.

Respectfully,

G. C. CLARKSON, F.C.A.,

of Clarkson, Gordon & Dilworth,

Chartered Accountants, Toronto.

APPENDIX 12

(Signed) — "R.F.S."
" — "A.F.M."
" — "W.A.A."
" — "C.H.M."

DETAILED DESCRIPTION OF HYDRO RADIAL PROJECT, PREPARED BY HYDRO POWER COMMISSION.

"TORONTO EASTERN:

The line commences at Bowmanville and extends westerly through the Township of Darlington, through Oshawa and Whitby to Pickering. On this portion the original grading was done by the Toronto Eastern Railway giving a steel road as far west as Whitby. The grading, however, was completed to Pickering, but the steel was never laid on this latter portion extending west of Whitby. The location adopted by the Commission from Pickering westerly parallels in a general way the Kingston Road to the Grand Trunk Crossing of the Kingston Road at Lot 13, Scarborough Township, and is located about midway between the original location projected of the Toronto Eastern and the Kingston Road, this location being considered more favorable than that projected by the original company. From the crossing with the Kingston Road the line extends westerly roughly paralleling the Grand Trunk and located a short distance north to the crossing of the branch line from Scarborough Junction to Markham and Stouffville. The line then diverges slightly roughly paralleling St. Clair Ave. to a crossing with the east branch of the Don River, thence southerly through a thickly populated district of the City of Toronto to Ashbridge's Bay, over the right of way provided by the Harbour Commission into a connection at the foot of Church, Bay or York Street with the proposed uptown terminal. The estimates provide in the initial period of 1924 for the complete rehabilitation of the existing line of the Toronto Eastern Railway, and the new construction is noted in Exhibit 21 before the Radial Commission.

It should be noted that a large amount of the capital expenditure is for the portion lying within the City limits and "which is occasioned by the demand of grade separation by the City and the high speed line. To effect this certain heavy work is necessary, even in the initial stages of operation, as is shown by the examination of the profile extending southerly from the upper Don branch. It is considered unnecessary for the time being to elevate the tracks on the Harbour Terminal until track conditions would warrant same, and the estimates are prepared on the lower grade line.

RESUME OF SPECIFICATIONS.

Toronto & Suburban Sections.

Right of Way 100 ft. wide.
Ruling grade 1.25%.
Maximum curvature 6°.
Overhead clearance 18 ft.
Bridge loading E. 50.
Bridge construction, steel and concrete.
Weight of rail, 80 lbs.
Distribution System, 1,500 volt conductor, 10 point Catenary on cross span for double track and on brackets for single track.
Ultimate complete grade separation through Toronto.

Remaining Sections.

Right of Way 66 ft. wide.
Ruling grade, 3.5%.
Maximum curvature, 10°.
Overhead clearance, 15 ft. 3 in.
Bridge loading, E.40.
Bridge construction, partly steel and concrete, partly timber.
Weight of rail through towns, 80 lbs., elsewhere 60 lbs.
Distribution System same as Toronto & Suburban sections.

"TORONTO-ST. CATHARINES:

The line extends westerly from a connection with the proposed uptown terminal at the foot of Bay Street across the Harbour Commission's property, through the Exhibition Grounds to Sunnyside, thence westerly paralleling the Grand Trunk to Clarkson. From here the line diverges slightly to the south passing through the centre of Oakville and to a proposed connection with the Hamilton Radial Railway. From Oakville the line parallels the latter to Burlington. In the event of the acquisition of this line this portion would be co-ordinated in the same. From Burlington the line extends westerly passing just south of Aldershot, and effecting entrance into the City of Hamilton by paralleling the Grand Trunk right-of-way into the foot of James St. Through Hamilton two locations were estimated upon, one extending through on the Grand Trunk right-of-way providing for additional trackage, and the other an entirely independent line free from any operating restrictions that the former might impose. From the east city limits of Hamilton the line extends Easterly crossing the Grand Trunk at grade near Stoney Creek and roughly paralleling same through to Grimsby, where it diverges to the south and closely parallels the main highway through to a point about a mile and a half west of the Grand Trunk station at St. Catharines. Provision was made at the grade crossing of the Grand Trunk at Stoney Creek for its ultimate elimination. At. St. Catharines a junction is effected with the Niagara, St. Catharines & Toronto Railway, which it is proposed to use as a connecting link with the Frontier at Niagara Falls.

RESUME OF SPECIFICATIONS

Toronto-Hamilton Division.

Right of Way, 100 ft. wide.
Ruling grade, 0.5% (except for short stretches in Toronto and Hamilton where grade separation has demanded slight increases).
Maximum curvature, 6°, except for one 10°.
Overhead clearance, 18 ft.
Bridge loading, E.50.
Bridge construction, steel and concrete.
Weight of rail 80 lbs.
Distribution System. 1,500 volt conductor, 10 point catenary on cross span for double, and brackets for single track.
Ultimate complete grade separation through Toronto and suburbs and in north and centre Hamilton.

Hamilton-St. Catharines Division. Stoney Creek-St. Catharines Sec.

Right of Way, 100 ft. wide.
Ruling grade, 1.5%.
Maximum curvature, 4°.
Overhead clearance, 24 ft.
Bridge loading, E.50.
Bridge construction, steel and concrete.
Weight of rail, 80 lbs.
Distribution System, same as Toronto-Hamilton.

St. Catharines-Niagara Falls, not including Niagara Street Railway.

Right of Way, 66 ft. with a few short stretches of 50 ft.
Ruling grade, 1.83%. (virtual).
Maximum curvature, 8° 30′ except in city.
Overhead clearance, 20 ft.
Bridge loading when improvements completed will be E60 to E50.
Bridge construction, wooden structures, being gradually replaced with steel and concrete or earth fill.
Distribution system, 600 volt direct suspension brackets. Changes in overhead insulation and substation equipment are required to provide for 1,500 volt operation.
Partial grade separation through Merritton and Thorold.

NIAGARA, ST. CATHARINES & TORONTO RLY.

As already noted the acquisition of this system will provide a Frontier connection for the Toronto-St. Catharines line, and, while it is intended for the time being to use the existing line between St. Catharines and Thorold, a location has been established which would eliminate many of the objectionable features which are now limiting factors in the operation of the system as a through line. The estimates provide for the necessary rehabilitation of this system to bring same up to the standard required as a through line and such other replacements or betterments as are considered necessary for the efficient operation of same. Negotiations have been conducted with certain American lines in order to effect an international connection at the frontier, and the belief is warranted that such may be effected, giving a direct connection with the centre of Buffalo, so that through passengers and freight may be efficiently handled from that centre to Toronto.

RESUME OF SPECIFICATIONS.

Right of Way, 50 to 66 feet, when not on highway.
Ruling grade, about 2.27% in private right of way, 5% on streets and other highways.
Maximum curvature, 20°, except on street railway systems and at car barns.
Bridge loading, about E45 to E25.
Bridge construction largely timber with a number of steel swing spans.
Weight of rail, 56 to 67 lbs., also a considerable amount of 80 lb. relay.
Distribution System, 600 volt conductor, direct suspension on cross span along certain streets, elsewhere on brackets.

WENTWORTH-WATERLOO DIVISION:

The location extends west from the junction with the main line in the vicinity of the Desjardins Canal crossing the Grand Trunk at grade and undercrossing the cemetery and the Toronto, Hamilton and Buffalo Railway. An alternative location, however, has been established which will provide for the elimination of the grade crossing with the Grand Trunk Railway. From the undercrossing of the T. H. & B. the line extends westerly up the Dundas Valley to Copetown, thence via Brockton, Sheffield to Galt, effecting a connection with the Grand Trunk Railway, Galt, Hespeler & Guelph branch over which it is proposed to obtain running rights, and via a cross town connection with the Galt, Kitchener & Elmira branch of the Grand Trunk Railway, which it is proposed to acquire. This latter branch serves all the principal industries in Kitchener, and with slight expense can be arranged to connect with the principal industries of Galt. At Kitchener it is proposed by new construction to eliminate present operation over the main line tracks of the Grand Trunk; Below the Preston yard of the Grand Trunk Railway across river connection is proposed in order to effect efficient train movement through Guelph via Preston to Kitchener and Galt. At Guelph a connection is proposed from a point near the Guelph Junction to the end of the line on Waterloo Road of the Guelph Radial Railway, thereby effecting a central passenger entrance into the centre of Guelph and a freight connection through the lower outskirts of Guelph with the Toronto Suburban.

RESUME OF SPECIFICATIONS

Right of Way, 100 feet wide.
Ruling Grade, 1.8%.
Maximum curvature, 8°.
Overhead clearance, 18 feet.
Bridge loading, E50 Hamilton to Galt, E30 to E35 remaining sections.
Bridge construction, steel and masonry except for a very few timber structures.
Distribution System, 1500 volt conductor, catenary on brackets.

TORONTO SUBURBAN:

It is proposed to acquire the existing line of the Toronto Suburban Railway Company extending westerly from Lambton to Guelph and the line extending from Weston to Woodbridge. Certain operations of the existing system now within the City of Toronto are essentially city operation and it is expected will be turned over to the City Transportation Commission for operation. It is intended by new construction to effect physical connection with

both lines mentioned via the route of the old Belt Line Railway in the Humber Valley with the main line extending west from Sunnyside by undercrossing the Grand Trunk Railway and ramping up to the grade elevation of the main line. This will then permit the cars of the Toronto Suburban Railway to traverse the entire distance within the urban area of Toronto at high speed.

RESUME OF SPECIFICATIONS

Guelph and Lambton Swansea Sections.

Right of Way, 66 ft. wide.
Ruling Grade, 2% compensated except for a few short stretches somewhat steeper which may be operated as velocity grades.
Maximum curvature, 11° excluding one 20° curve.
Overhead clearance, top of rail to underside of permanent structure 16 ft. 3 in.
Bridge loading E50 to E41.5.
Bridge construction chiefly steel and concrete, a few timber structures.
Weight of rail, 60 lbs. per yard.
Distribution System, 1500 volt conductor, 5 point catenary on brackets.

Weston and Woodbridge Sections.

Right of Way, 66 feet wide except when on or alongside highway.
Ruling grade, 3% virtual on private right of way, about 5% on highway.
Maximum curvature, 12° except on streets.
Overhead clearance, 12 ft. 4 in.
Bridge loading, about E.41.5.
Bridge construction, chiefly steel and concrete, a few timber structures.
Weight of rail 60 lbs. per yard.
Distribution System. 600 volt conductor. direct suspension on brackets with cross span on streets.

Remaining Sections.

Right of Way, 66 ft. wide.
Ruling grade, 3.5%.
Maximum curvature, 10°.
Overhead clearance, 15 ft. 3 in.
Bridge loading, E40.
Bridge construction, partly steel and concrete, partly timber.
Weight of rail through towns 80 lbs., elsewhere 60 lbs.
Distribution System, same as Toronto & Suburban Sections."

No reference to mileage or double tracking is included in the above.

APPENDIX 13

(Signed) "R.F.S."
" "A.F.M."
" "W.A.A."
" "C.H.M."

(Copy)

Ottawa, Ontario,
June 23rd, 1920

Memorandum for Hon'ble J. D. Reid,
Minister of Railways and Canals.

I have discussed with the members of the Ontario Government the question of purchasing the three electric railways in the Province of Ontario owned by the Canadian National Railways, namely: The Toronto and Eastern Railway, the Toronto Suburban Railway, the Niagara, St. Catharines and Toronto Railway. I informed them of the discussion with the sub-committee of the Dominion Cabinet when last here in Ottawa. and advised that I was prepared to recommend the taking over of the said electric railways on the following terms:—

Toronto Eastern Railway. Price $706.000.00 payable by Hydro Power Commission 4½% fifty year bonds guaranteed by the Province of Ontario.

Toronto Suburban Railway. On this railway there are $2,628,000.00 of outstanding 4½% bonds due 1961. This is to be taken over by the Hydro Power Commission, and the Hydro Power Commission to assume the bonds.

The Niagara, St. Catharines and Toronto Ry. Price for this railway to be $3,544,374.10. On this road there are $1,098,000.00 five per cent bonds due 1929. The Hydro Power Commission will assume these bonds and give Hydro Power Commission bonds guaranteed by the Province of Ontario, 4½% fifty-year bonds for the difference between $1,098,000.00 and $3,544,374.10.

It was understood in the discussion with the sub-committee of the Dominion Cabinet that the Toronto Suburban Railway and the Niagara, St. Catharines and Toronto Railway must be taken together.

I understand a meeting of the Ontario Government will be held to-morrow (Thursday), and may I ask that you authorize me to say the Dominion Government are prepared to accept this offer?

It is understood, if the Hydro Power Commission take over these radial railways on behalf of the municipalities, it is one of the conditions, in view of the above agreement as to price, that an exclusive traffic agreement will be made for all traffic between the above electric railways and the Canadian National Government-owned railways.

(Signed) ADAM BECK

Council have approved of
this proposition, June 23rd, 1920.

J. D. REID.

MINORITY REPORT

August 8th, 1921.
OSGOODE HALL

To His Honour The Lieutenant-Governor:

The Commissioners appointed by Your Honour to inquire into and report upon the whole question of Hydro-Electric Railways for the Province of Ontario, have completed the investigation. Finding that I am unable to agree with the other members of Your Commission upon a report and recommendations, I submit a separate report to Your Honour, with recommendations, as a result of the inquiries which have been made by the Commission.

The Royal Commission dated the twenty-first day of July, 1920, authorized and empowered the Commission:

(1) "To inquire into and report upon the whole question of Hydro-Electric Railways, and all matters which in the opinion of the Commissioners are relevant thereto, with particular reference to the matters that are raised by and discussed in the statement of the Government issued on the Sixth day of July, instant, a copy of which is hereto attached."

(2) "To make such suggestions and recommendations in connection with or arising out of any of the subjects thus indicated as in the opinion of the said Commission may be desirable."

The statement of the Government issued on the Sixth day of July, and particularly referred to in the Royal Commission, brings up the whole question very clearly, on Page 7 of the printed document. I propose to take this query of the Government, and answer it very plainly. It is my desire to strip the whole subject of technicalities and deal with it in the broad manner indicated in the Government statement.

The Government asks:

"THE BROAD QUESTION OF POLICY IS NOW UP FOR DETERMINATION. SHALL THIS GOVERNMENT ADOPT THE PRINCIPLE OF PUBLICLY OWNED AND OPERATED RADIAL RAILWAY SYSTEMS FOR THE PROVINCE AS A WHOLE—AND PROCEED ENERGETICALLY, THROUGH THE HYDRO ELECTRIC POWER COMMISSION, AS CONDITIONS MAY WARRANT, WITH THE CONSTRUCTION (OR ACQUISITION) AND OPERATION OF SUCH A SYSTEM."

In a report to the Government on Hydro-Electric Power Commission finances dated the Third Day of March, 1920, made by F. C. Clarkson, Esq., as a result of an audit by him, he refers to "Hydro-Electric Railway Lines," on Page 20 of the printed report. One statement he makes should be considered in connection with the Government query quoted above.

Mr. Clarkson states:

"Under section 7 of the Act it is provided that neither the Province nor the Commission shall be liable for the payment of the bonds to be issued by the Commission except to the extent of the moneys which shall be received in connection with the operation of the railway line or from the sale of debentures to be deposited with the Commission by the municipalities. Under Section 8 of the Act, however, it is provided that the Lieutenant-Governor in Council may authorize the Treasurer of the Province of Ontario to guarantee the payment of the bonds issued by the Commission.

THERE IS ALMOST A CERTAINTY THAT THE BONDS SO TO BE ISSUED IN RESPECT OF ANY RADIAL LINE CANNOT BE SOLD BY THE COMMISSION TO ADVANTAGE WITHOUT THE GUARANTEE OF THE PROVINCE."

It is quite plain from the evidence, that the bonds to raise money to build electric radial railways in Ontario must be guaranteed by the Province, if the money is to be raised advantageously, or a radial scheme successfully launched. Radial railways in Ontario designed to engage in

interurban, suburban and freight traffic, operating through various municipalities, as is proposed, cannot be successfully financed without the Government pledging the credit of the people to back such a publicly owned enterprise. I cannot agree with any suggestions made during this investigation, that municipalities should finance radials operating through various municipalities without a Government guarantee. After listening to a long enquiry, to say the municipalities must finance their own radials without a Government guarantee is equivalent to saying, radials must not be built. I agree with Mr. Clarkson that the bonds to be issued in respect of any radial line cannot be sold to advantage without the guarantee of the Province. I propose to divide the query of the Government into two sections.

FIRST. "SHALL THIS GOVERNMENT ADOPT THE PRINCIPLE OF PUBLICLY OWNED AND OPERATED RADIAL RAILWAY SYSTEMS FOR THE PROVINCE AS A WHOLE?"

In my judgment, YES.

SECOND. "AND PROCEED ENERGETICALLY THROUGH THE HYDRO-ELECTRIC POWER COMMISSION AS CONDITIONS MAY WARRANT? WITH THE CONSTRUCTION (OR ACQUISITION) AND OPERATION OF SUCH A SYSTEM?"

In my judgment, YES, qualified by certain recommendations and suggestions which I will deal with later. Carrying out further, the answers to the query of the Government, I respectfully recommend:

1. That the Government adopt the principle of publicly owned and operated electric railways for the Province of Ontario.
2. That the Government instruct the Hydro-Electric Power Commission to proceed at once with negotiations to complete contracts or agreements for the following; the purchase of certain electric railways now owned by the Federal Government and the traffic arrangements which may enter into the agreements; the purchase of a section of the Grand Trunk steam railway owned by the Federal Government; to acquire running rights over certain sections of the Grand Trunk Railway; entrance into and through Hamilton on the right of way of the Grand Trunk Railway and other arrangements and agreements which I propose to outline in this report.
3. Upon the completion of such agreements or contracts, or the choice of alternate plans where a satisfactory agreement or contract is not arrived at, the Hydro-Electric Power Commission shall at once place before the Government the result as completed, showing clearly where their expectations were realized and where alternate plans had to be chosen.
4. Following the action indicated above, the Government shall request the Hydro-Electric Power Commission to recommend to the Government, the most advantageous and economical time to commence construction of radial railways, and on which Division or Divisions construction should begin first. The amount of money already expended on the Toronto and St. Catharines Division with the desire of the municipalities so clearly expressed, would suggest that this Division ought to be commenced first and hurried to completion, so that the revenues may be earned as speedily as possible. This Division is admittedly the best and most favourable in the whole project.
5. I strongly recommend to the Government and the Hydro-Electric Power Commission, that when they are deciding the date for commencement of construction of radial railways, very great weight should be given to the present state of unemployment. The Government could help a great deal by commencing work on such a public utility as radial railways, whereby many men could earn wages and the Government obtain return in labour for the money expended.
6. The Hydro-Electric Power Commission should have as a member one of the best and most experienced railway men in operating and traffic who can be found. Such a railway expert would be of great assistance to Chief Engineer Gaby, whose duties in connection with the power projects are onerous now, and upon whom much of the work connected with radials is likely to fall. Legislation may have to be passed to increase the number of members on the Commission, but such an experienced railway authority should be obtained without delay and placed in a position where he

could be of greatest assistance to the Hydro Electric Power Commission. This is no reflection upon any of the engineers of the Hydro Commission, but a recommendation to assist the Government and the Commission in a great public project of magnitude.

7. The utmost cooperation and frankness should govern the relations of the Hydro-Electric Power Commission, in this great public enterprise of publicly owned and operated radial railways. There can be only one purpose and that is the progress and welfare of this great Province. The scheme of radial railways outlined before the Royal Commission by the Hydro Power Commission, amplified and improved by experts in evidence before the Commission will be of immense benefit to the territory involved and the Province as a whole, and there is every reason to believe confidently that the radials will be self-supporting, providing service at cost to the citizens and ensuring a healthy development and progress for Ontario which lack of such transportation facilities will seriously obstruct.

The following questions arising directly or indirectly out of the Government statement of July 6th, 1920, have been answered in the recommendations.

(1) Shall the Government endorse the principle of electric radial railways for Ontario and back the municipalities by guaranteeing the necessary bonds?

(2) What contracts or agreements have yet to be completed in connection with the scheme?

(3) When should construction commence and on which divisions?

(4) Should the Hydro Elecric Power Commission be relieved from the care and responsibility of operating the radial railways proposed?

(5) Will the scheme as presented to the Royal Commission be self-supporting?

In addition, I propose to deal with subjects arising out of the Government statement and the inquiry, in the following order:

(1) Fundamental difference between the radial railways as proposed and interurban electric railways of the United States, which must be considered in any comparison made.

(2) City of Toronto.

(3) Duplication and electrification of steam railways.

(4) Canadian National Railways and competition of radials, and of good roads.

(5) Financial Liabilities of the Province of Ontario.

(6) Mr. Gutelius' proposal of electric railways for this territory.

(7) Mr. R. I. Todd's remarks, on the benefit to the State of Indiana of electric interurban railways.

(8) Tests to which the proposal has been subjected.

(9) Responsibility for delay in the investigation.

(10) I propose to take each recommendation made in order, and deal with the whole subject, by placing each part with its particular recommendation.

DIFFERENCES BETWEEN RADIAL RAILWAYS PROPOSED AND INTERURBAN RAILWAYS IN THE UNITED STATES.

One of the great difficulties during the investigation was in finding any radial railways on this continent with the same fundamental characteristics, such as the combination of services to be given with the physical advantages as proposed in the Hydro project. Many experts have given evidence of the operation of interurban electric railways with which they were well-acquainted and to some of which evidence I propose to refer in this report.

The Engineers of the Hydro Commission and the Engineers of the Arnold Staff were most positive in their evidence indicating that there were great differences between the radial railways proposed and the interurban electric railways of the United States. The general evidence is greatly in support of this contention.

In my opinion, many of the experienced operating experts from the United States who gave evidence, overlooked or failed thoroughly to appreciate these very evident differences in the electric railways which they used for comparison. In the summary following, I have indicated the main fundamental differences between the interurban electric railways of the United States and the proposal made by the Hydro Electric Power Commission for Radial Railways in Ontario.

FUNDAMENTAL DIFFERENCES BETWEEN PROPOSED RADIAL RAILWAYS FOR ONTARIO AND ELECTRIC INTERURBAN RAILWAYS IN UNITED STATES.

PROPOSED RADIAL RAILWAYS FOR ONTARIO

It is proposed in the Hydro Radial Scheme to provide three main classes of services. These services are composed of, a rapid transit interurban passenger service between urban centres, a rapid transit suburban passenger service from main terminal centres, and a regular freight service, including carload freight, less than carload freight and miscellaneous freight for the system.

Two Radial Railways proposed are to be of very high class construction, thoroughly equipped to carry on the services mentioned and enter the main terminal cities of Toronto and Hamilton over their own right of way to their own terminal. The Railways to be constructed are wholly on their own right of way.

Two electric railway divisions are to be acquired which are in operation at the present time, namely: the Niagara Central lines which are in a splendid strategical position to further develop their already big freight traffic and over which a frontier connection will be made for the proposed system as a whole; and the Toronto-Guelph Railway which it proposed to connect to the Toronto Terminal, by joining it to the Toronto-St. Catharines Division on the Lake Shore Road between Sunnyside and the Humber.

The proposed Radial Railways are to be thoroughly equipped for carrying carload and less than carload freight over their own right of way and into the various urban terminal centres. The railways will have the co-operation of the Municipalities throughout the territory, will be free from franchise limitations imposed by Municipalities and the five divisions will be owned by the people and operated on a basis of service at cost.

The radial system as proposed will have the advantage of cheap power in abundance.

UNITED STATES ELECTRIC INTERURBAN RAILWAYS

Generally, as revealed in the evidence, the interurban electric railways of the United States, have varied characteristics and differ in many ways from the system as proposed for Ontario. Almost all of the interurban roads in the the United States enter the main terminals over the street railway tracks and have to follow the comparatively slowly operated city street cars. Several of them are almost wholly on their own right of way from the boundaries of the main cities. Some are partially on their own right of way from outside the city boundaries and partially follow the highways, while others are almost wholly on the highways and follow the contour of the roads.

The interurban electric railways as a rule when they enter main cities over street railway tracks make a financial arrangement with the city street railway for so doing. Often the interurban earnings of the electric railways of the United States mean the earnings of the interurban lines exclusive of the earnings in the main cities, or a division of fares with the city street railway.

The operation of these electric interurban roads is hampered by municipal franchises which particularly limit their freight operation.

Originally, many of the interurban systems in the United States were separate parts and amalgamated later into systems. For many reasons they apparently didn't engage in a regular freight business. It is quite clear that originally they were not designed to engage in freight service to any great extent. Type of construction, equipment, franchise limitations, opposition of steam roads and other reasons all entered into the question.

The most successful of the interurban railways in the United States are at present, doing their utmost to develop the freight business and are equipping the railways for that purpose.

None of them have the advantage in cheap and abundant power that the proposed radials for Ontario will have.

There is no doubt about the fundamental differences between the interurban electric railways in the United States and the radial railways as proposed for Ontario. It must be remembered that these differences affect every comparison that can be made or every test that can be

applied to the Hydro Radial Proposal. The differences affect the revenues both passenger and freight; revenues per mile of route or mile of track; cost of operation per mile of route or mile of track; cost of operation per car mile and revenue per car mile. All the figures of operation and revenue are affected by these differences, and to compare one of the electric interurban railways in the United States, its revenue and operation, with the Hydro project without taking into consideration all these fundamental differences is overlooking existing facts. The revenues and operating costs of electric interurban railways in the United States and the general experience in operation are a very helpful guide when all the fundamental differences are taken into consideration.

If a comparison in revenue and cost of operation is made, it would seem fair to compare interurban earnings and costs on the proposed railways with interurban earnings and costs on other railways; suburban earnings and costs with suburban earnings and costs on other railways; and freight earnings and costs with freight earnings and costs on other railways.

One expert, Bion J. Arnold, and his staff of assistants during this investigation completely segregated the earnings and costs by services. Mr. Arnold and his chief assistant, Mr. Fred Sager, were called to give evidence after making a most thorough investigation and comprehensive report on the whole scheme. A table in this report shows this segregation of earnings and costs in detail.

The Hydro Engineers during the investigation, repeatedly in their evidence, drew the attention of the Commissioners to the fundamental differences existing between the interurban railways of the United States and the Hydro Radial Proposals as before the Commission.

Six days after Your Commissioners were appointed, a Commission to enquire into electric Railways in the United States concluded its labours and presented a report and recommendations to the President.

The Commissioners in their recommendations, establish beyond doubt the fundamental differences referred to in this report. And it must be remembered that a great mass of the evidence against the scheme proposed was obtained by comparing the expectations for it, with electric railways in the United States.

The Federal Report has often been referred to in evidence and is attached to the majority report of Your Commissioners as one of the appendices. It should be remembered, that the report deals with the whole subject of electric railways, in the United States, both street railway systems and interurban or radial railways as they are called in Ontario.

These Commissioners state:

"A large number of factors have contributed to the present plight of the electric railway industry. These may be mentioned:

(a) THEY WERE NOT CONSERVATIVELY FINANCED IN THEIR EARLY YEARS, AND HAVE NOT SINCE MADE GOOD THEIR OVER-CAPITALIZATION, EXCEPT TO A LIMITED EXTENT, OTHERWISE THAN THROUGH THE PROGRESS OF BANKRUPTCY AND REORGANIZATION."

The Commissioners who made this Federal Report are:

CHARLES E. ELMQUIST, President and General Solicitor of the National Association of Railway and Utilities Commissioners.

EDWIN F. SWEET, Assistant Secretary of Commerce, representing the Department of Commerce.

PHILIP N. GADSDEN, representing the American Electric Railway Association.

ROYAL MEEKER, Commissioner of Labour Statistics, Department of Labour, representing that Department.

LOUIS B. WEHLE, General Counsel of the War Finance Corporation, representing the Treasury Department.

CHARLES W. BEALL of Harris, Forbes & Company, New York, Bankers, representing the investment Bankers' Association of America.

WILLIAM D. MAHON, President of Amalgamated Association of Street & Electric Railway Employees of America, representing that Association.

GEORGE L. BAKER, Mayor of Portland, Oregon, representing the American Cities' League of Mayors.

The Commissioners proceeded in the following manner:

"The Commission gathered its testimony mainly in two ways: First, by public hearings, at which 95 witnesses testified in person and 21 others sent prepared statements; second, by a series of questionnaires sent to every city in which there is a street or interurban railway, addressed to the electric railways, the mayors, chambers of commerce and the Central Labour Unions, and also to all the State Public Utility Commissions."

Among the conclusions and recommendations are the following:

"THE ELECTRIC RAILWAY FURNISHING TRANSPORTATION UPON RAILS IS AN ESSENTIAL UTILITY, AND SHOULD HAVE THE SYMPATHETIC UNDERSTANDING AND CO-OPERATION OF THE PUBLIC IF IT IS TO CONTINUE TO PERFORM A USEFUL PUBLIC SERVICE.

"THE ELECTRIC RAILWAY HAS BEEN, AND WILL CONTINUE TO BE, A PUBLIC UTILITY, SUBJECT TO PUBLIC CONTROL AS TO THE EXTENT AND CHARACTER OF THE SERVICE IT RENDERS, AND AS TO THE RATES IT CHARGES FOR SUCH SERVICE.

"IT IS OF THE HIGHEST IMPORTANCE THAT BOTH THE TOTAL COST OF THE SERVICE AND THE COST TO THE INDIVIDUALS WHO USE IT SHALL BE KEPT AS LOW AS POSSIBLE WITHOUT INJUSTICE TO THOSE WHO TAKE PART IN PRODUCING IT.

"The electric railways must expand to meet the growing needs of their communities; therefore, the first essential is to restore credit in order to obtain necessary new capital for the extension and improvement of service.

"RESTORATION OF CREDIT INVOLVES A READJUSTMENT OF RELATIONS WHICH WILL REMOVE PUBLIC ANTAGONISM, PROVIDE PUBLIC CO-OPERATION, AND INSURE TO THE INVESTOR THE INTEGRITY OF HIS INVESTMENT AND A FAIR RATE OF RETURN THEREON.

"THERE CAN BE NO SATISFACTORY SOLUTION OF THE ELECTRIC RAILWAY PROBLEM WHICH DOES NOT INCLUDE THE FAIR VALUATION OF THE PROPERTY EMPLOYED IN THE PUBLIC SERVICE, AND WHERE THAT IS DONE, THE COMPANIES SHOULD VOLUNTARILY REDUCE ANY EXCESSIVE CAPITALIZATION TO THE BASIS OF SUCH VALUE.

"There is no insuperable objection to a large, wide-awake city having exclusive jurisdiction over the rates and services of public utilities.

"The necessity for scientific and successful regulation of systems, whether large or small, and especially those which operate through several cities and villages and in rural territory, leads to the conclusion that local regulation should generally be subject to the superior authority of the State, whether as a matter of original jurisdiction or through the medium of appeal.

"Cost-of-service contracts are in the experimental stage, but where tried, they seem to have secured a fair return upon capital, established credit, and effected reasonably satisfactory public service. Such contracts may safely be entered into where the public right eventually to acquire the property is safeguarded.

"The right of the public to own and operate public utilities should be recognized and legal obstacles in the way of its exercise should be removed.

"PUBLIC OWNERSHIP AND OPERATION OF LOCAL TRANSPORTATION SYSTEMS, WHETHER OR NOT IT BE CONSIDERED ULTIMATELY DESIRABLE, IS NOW, BECAUSE OF CONSTITUTIONAL AND STATUTORY PROHIBITIONS, FINANCIAL AND LEGAL OBSTACLES, THE PRESENT DEGREE OF RESPONSIBILITY OF OUR LOCAL GOVERNMENTS, AND THE STATE OF PUBLIC OPINION, PRACTICABLE IN SO FEW INSTANCES, THAT PRIVATE OWNERSHIP AND OPERATION MUST AS A GENERAL RULE BE CONTINUED FOR AN EXTENDED PERIOD.

"IF THE REFORMS INCIDENT TO PUBLIC REGULATION WHICH WE SUGGEST IN THIS REPORT SHOULD NOT RESULT IN MAKING PRIVATE OWNERSHIP SATISFACTORY TO THE PUBLIC, SUCH REFORMS SHOULD AT LEAST ENABLE PUBLIC OWNERSHIP TO BE ESTABLISHED UPON A JUST AND EQUITABLE BASIS."

Among many reasons given by the Commissioners for the "Financial Condition of the Electric Railway industry," are:—

"A large number of factors have contributed to the present plight of the electric railway industry. These may be mentioned:

"THEY WERE NOT CONSERVATIVELY FINANCED IN THEIR EARLY YEARS, AND HAVE NOT SINCE MADE GOOD THEIR OVER-CAPITALIZATION, EXCEPT TO A LIMITED EXTENT, OTHERWISE THAN THROUGH THE PROCESS OF BANKRUPTCY AND REORGANIZATION. In the early days the promoters of electric railway properties believed that long term franchises with a five cent fare would be permanently profitable. Large sums of money were required to develop the business. In many cases the promoters issued bonus stock to represent their hopes and expectations. This bonus stock did not represent money, service or property, and added nothing to the value of the plant. As a result of this practice, there are many cases where the existing capitalization exceeds the investment in the plant or the value thereof.

"Neglect to amortize this excess capitalization.

"Failure to amortize the normal accrued depreciation.

"Payment of unearned dividends and neglect of ordinary maintenance.

"Limited franchises which impair credit and toward the expiration of the franchise result in neglect of the maintenance of the property.

"HOLDING COMPANIES AND BANKER CONTROL: About 75 per cent of the public utilities of the country are held, in whole or in part, by so-called "holding companies" which are responsible for their operation. This financing is done in large part through the securities of the parent company, which securities are supported by the securities of the various operating companies. This frequently gives an element of strength to the securities of the parent company which a single localized operating company could not in all cases present. If it were not for the supporting strength of these parent companies, many of the individual operating companies would have gone under before January 1, 1918.

"Through these holding companies the electric railways threaten to become a banker-controlled industry. Those who have the ultimate say in matters of street railway policy from the point of view of investors have been dependent for their profits and their power upon the volume of securities outstanding and the frequency with which these securities have been exchanged or refunded. Holding companies in many instances have been responsible for over-capitalization, and have insisted upon drawing from the underlying companies every possible cent that could be secured in order to make a showing on these inflated securities. Hon. Joseph B. Eastman, at present a member of the Interstate Commerce Commission, discussed the question as follows:

> "'In the third place a factor of weakness I think was the control of the companies in many instances by holding companies organized in the form of voluntary associations, or to use a more technical term, express trusts. Although the stock and bonds of the street railway companies themselves were issued under public supervisions, these voluntary associations which corralled all their stock were subject to no regulation whatever and issued shares upon an inflated basis, and that had the result of accentuating the desire to draw every possible drop of income out of the underlying companies that could be secured in order to support earnings upon the inflated shares of these volutary associations."

"Through this system of financing and management, the utilities have been largely controlled by persons living distant from the community affected by a particular electric railway, whose prime consideration has been to secure a return upon the property. This "Absentee" management and control has not been successful in bringing about the proper spirit of co-operation between the local managers, employees, and the public. Since the electric railway companies come into immediate daily contact with large numbers of people, it is of the utmost importance that the industry should gain and hold the respect, confidence and good-will of its patrons. IF THE LOCAL PUBLIC SHOULD INVEST ITS MONEY IN THE STOCKS AND BONDS OF ITS LOCAL UTILITIES THERE WOULD BE AN IMPROVEMENT IN THE RELATIONS NOW EXISTING BETWEEN THE CORPORATION AND THE PUBLIC."

Under "Preservation of Records" the Commission states:

"We would particularly urge public officials and officers of the electric railways to co-operate seriously in the protection and preservation of all corporate, financial and cost records,

"Service-at-cost plans have been recently rejected by popular vote, largely on the issue of valuation, in Chicago, Denver and Minneapolis. The public, justly or unjustly, has become to be so suspicious of the electric railway companies that it may be expected to reject any service-at-cost or public ownership question submitted to popular vote, no matter how fairly the plan may be formulated, if they are not thoroughly convinced that the capital item has been fairly and honestly arrived at. The failure of a company to preserve its records may in the end hurt its stockholders more than it may the public.

Dr. Delos F. Wilcox, who was engaged by the United States Commission "to aid in analyzing the testimony gathered and to make suggestions to the Commission with reference to its report" stated in his evidence:

"I have reached the conclusion that there is no ultimate solution unless we undertake local transportation as a public function and perform it as a public function. The street railways cannot exist except through their franchises on the public streets. You could never give them the freedom again from domination that private business enjoys. There is an irreconcilable conflict with the public and operation for profit has resulted in distrust and hatred and poisoning of the public atmosphere in our cities."

The evidence given before your Commission provides many glimpses of the reasons underlying the United States Commission's report. The evidence of Mr. F. W. Coen, treasurer of the Lake Shore Electric Railway, illustrates the difficulty of arriving at the actual capital cost of a property in the United States.

PAGE 2750.

Q. Your property stands you in at the present time $14,161,653.06? A. Yes.
Q. To pay 6% interest on that it would require about $800,000 would it not? A. Approximately that.
Q. $840,000? A. Yes.
Q. And in 1919 your net earnings were $577,000 after paying operating expenses and taxes? A. That is right.
Q. Nearly $600,000? A. Yes.
Q. And this year they would be, according to you, about $50,000 more, that would be $637,000. So that with your property at a cost of $14,000,000 it would not have sufficient to pay 6%? A. No."

PAGE 2752.

"COMMISSIONER BANCROFT: Did you say the valuation is $14,000,000? A. Yes; that is the figure in the balance sheet.
Q. Is that the whole business? A. Yes.
Mr. HELLMUTH: Q. I thought this was the Lake Shore Electric? A. That is the Lake Shore Electric forgetting the others entirely.
COMMISSIONER BANCROFT: Q. The $14,000,000 does not include the others? A. No.
Q. Then $14,000,000 is the valuation? A. I didn't say that; it is the total of the condensed balance sheet.
Q. Mr. Hellmuth asked you if your earnings on the Lake Shore Electric Railroad would pay interest on the $14,000,000. Now, where did that come in? A. Of course, it would not.
Q. Where does the $14,000,000 come in?
MR. HELLMUTH: That is the cost of road and equipment, $14,161,000.
COMMISSIONER BANCROFT: Just for the Lake Shore Electric?
MR. HELLMUTH: Yes.
MR. MCKAY: I do not want to interrupt but it looks on the balance sheet and it might as well be suggested now as on cross-examination—
MR. HELLMUTH: Page?
MR. MCKAY: Page 11, as though that were a balancing item. That is to say, they added up their capital stock, first preferred capital stock, second preferred, including the common, bonds and car trust and other things outstanding and they took what they had outside the Road and Equipment at the actual figures such as they were, and put the cost of Road and Equipment at $14,161,653.06, being the exact amount necessary to balance. It looks like that.

COMMISSIONER BANCROFT: If the cost of Road and Equipment is $14,000,000 as stated here, and it is only 120 miles it is over $116,000 a mile for a purely interurban road?
A. I didn't say that that was the value of our property; I would not say so now.
MR. HELLMUTH: Q. What do you say about the cost?
A. That is not the cost.
Q. What is it? A. Under the laws of our state at the time the work was done, before you could issue any bonds you must have actual stocks, and portion of that does not represent actual money spent.
Q. I want to get really at the actual cost of that road?
A. Roughly speaking I would say the investment in that property was somewhere?—
Q. Including what you put into it? A. Yes—about $9,000,000 or in that neighborhood.
COMMISSIONER MITCHELL: Of real money? A. Yes.
Q. Does that include the amount you put in from year to year? A. Yes; less some depreciation charges.
Q. So that in real money about $9,000,000? A. In that neighborhood."

The proposal for Ontario is to build radial railways, publicly owned and operated, with the co-operation of the municipalities backed by the Provincial Government, and operated by the Hydro Commission as trustees for the Municipalities. There is no such comparison in the United States. It is not good judgment to condemn the proposed scheme because of comparisons made between the estimates of the Hydro Engineers and the Arnold Staff and the operation of interurban railways in the United States without giving weight to all the differences. It appears to me that my colleagues on the Commission have been too much impressed with this evidence without considering sufficiently the fundamental differences which exist.

CITY OF TORONTO: Considerable discussion has taken place during the Inquiry, about the position of the City of Toronto in the Radial Project. Suggestions were made of possibility of conflict of interest, between the Administration of the Toronto Street Railway Lines and the Administration of the Radial Railways.

Manager Couzens of the Toronto Transportation Commission and Engineer Cousins of the Harbour Commission consider it inconceivable that two Commissions, both acting in the interests of the people of Toronto, could not agree on what is best for the citizens and work in harmony to that end.

There is no necessity for conflict between the Toronto Street Railway System and the proposed Radial Railways.

Much discussion has taken place about the traffic expected on these radials in the City of Toronto and known as suburban earnings.

The Toronto-St. Catharines Division enters Toronto at Sunnyside and the railway is wholly on its own right-of-way to the Bay Street Terminal.

The Toronto Eastern Railway enters Ward 8 over its own right of way and continues on its own right of way to the Bay Street Terminal. A considerable amount of the right of way for both these railways is on the property controlled by the Harbour Commission.

On January 1st, 1920, the rate payers of Toronto carried a by-law assuming a debenture obligation of $4,328,665 as the city's share for the construction of the Toronto Eastern Railway. This was carried by a vote of 21,978 in favour and 2,356 against.

On January 16th, 1916, the ratepayers of Toronto carried a by-law assuming a debenture obligation of $4,240,196 as the city's share of the construction of the Toronto-Port Credit-London Radial Railway. This was carried by a vote of 21,161 to 5,166.

At a later date, as explained in the Clarkson letter, included in this report, the share of Toronto for the Toronto-Port Credit-London Line was adopted as the city's share of the Toronto-Port Credit-St. Catharines Line. The total amount carried in the two by-laws was $8,568,861, based on estimates made from prices in existence previous to the date when the by-laws were submitted.

Surely it is reasonable to assume, that earnings in Toronto must be obtained to support Toronto's share of the investment in any case. It cannot be expected that other municipalities will provide all the earnings for this.

The radials enter Toronto over their own right-of-way. It cannot be considered that the radials earning revenue within Toronto on their own right-of-way are coming in conflict with the Street Railway System. The steam railways have such a right now and exercise it, when desired. It is possible that the radial lines may save the city considerable expense in construction costs for street railway extension.

The three branches of the Toronto and York Radials, to be acquired in the "clean-up," may present a different problem, as they are operated mostly on highways and streets and their disposition is a matter of arrangement between the Transportation Commission and the Hydro Commission. The situation regarding these branches has developed during the investigation and should not be confused with the radial scheme as submitted to the Government and the Royal Commission.

There is no reason for lack of harmony between the Radials and the City System, but every reason for co-operation. The inferences about a possibility of conflict have no real foundation. Attempts to separate Toronto from her sister municipalities in the proposed radial scheme should be deprecated.

While it is true, that some of the right-of-way for the radials is on the property controlled by the Harbour Commission, with the opportunities of serving the industries in Ashbridge's Bay, there is every reason to believe, that should the present proposal be discouraged and then returned to in future years, it will cost a great deal more money then, than it will now, to obtain rights-of-way through Toronto. This is the experience of cities in the United States, judging from the evidence.

DUPLICATION, ELECTRIFICATION. AND GOOD ROADS: It has been urged during the investigation that many parts of the radial lines are a duplication of existing lines, particularly the Grand Trunk Railway. One expert in his evidence, declared that it might be a duplication of tracks, but certainly not a duplication of service.

The evidence shows clearly that in the territory involved there is a small amount of steam railway suburban or interurban passenger service, at what is known as "commutation rates." The Grand Trunk Railway does give a "commutation service" to points west of Toronto as far as Oakville.

Judging from the evidence it would seem that the steam railway attitude is that short haul passenger service at reduced fares is the business of an electric railway. The short haul passenger service mentioned does not attract a steam railway from the standpoint of earnings.

Mr. Neal of the C.P.R. stated quite frankly that up to fifteen miles radius it was not steam railway business. Others have stated that this class of passenger service does not pay a steam railway. Several experts in their evidence declared the proposals as duplication, without properly informing themselves as to whether the steam railways provided a suburban or an interurban service in this territory at "commutation rates." More significant still, electrification of sections of the steam roads to provide adequate services, instead of building electric radials, was urged.

Is it not folly to suggest expenditures of large sums of money to electrify existing steam roads, to provide a class of suburban and interurban service that the steam railways fight shy of now, apparently, because it does not pay well enough? If it is not attractive enough up to the present time, how much less so, if the added cost of electrification of sections of the line are undertaken? This class of business is profitable to an electric railway.

Steam roads or terminals may be electrified in the future, but it will be for the carrying on of what is essentially steam road business.

The suggestion to spend large sums in electrifying sections of steam railways in Canada at the present time, to do the service the radials are proposed for, cannot be regarded seriously.

Much emphasis has been made of the deficits on the Canadian National Railways, and the Government statement of July 6th, 1920, draws attention to this on Page 9, stating "The Province of Ontario must not, of course, come into competition with the Canadian National Railway System" and then the deficits are outlined.

The radial services should be regarded as supplementary to the steam railways. It is not likely the steam railways will be harmed by these additional facilities. It is proposed to make agreements to interchange freight with the Canadian National Railways, and Dr. Reid, Minister

of Railways, outlined what he understood would be the nature of the agreement. His explanation indicates co-operation and harmony between the radials and the National steam lines. The Federal Government has intimated willingness to sell to the Province, through the Hydro Commission, three of the five divisions in the proposal, two of which are operating now. One of the reasons for this is evidently to save the Hydro Commission from duplicating existing lines at those points. It is not likely that the Federal Government or the Canadian National Railways would sell these three divisions, and give a freight traffic agreement as outlined by Dr. Reid, if the radial system was going to hurt the National Lines.

The Province of Ontario is engaged in constructing many roadways of modern construction at the present time and is committed to an extensive policy in this direction. There is abundant evidence that the completion of these roads will facilitate freight trucking over them. The roads completed provide some evidence of this, particularly the Toronto Hamilton Highway. This development of light and heavy trucking of freight over the provincial roads certainly takes freight from the steam railways and comes into competition with them, but it would not be considered a valid reason for discouraging the construction of necessary good roads.

There is a greater problem involved in the trucking of freight over good roads. Your Commissioners had evidence of this on their visit to the United States.

The modern highway provides almost a free right-of-way for transporting freight by motor trucks both heavy and light. These highways both in Ontario, and the United States, are built largely by public money. Heavy trucking plays havoc with these expensively built roads. Who is going to find the money for maintaining and reconstructing them? Will money be found by the public continuously to maintain and construct these roads as a right-of-way for freight traffic? Or, will the freight traffic and other traffic have to pay for the maintenance and reconstruction of them?

In several States to the South, there are definite movements now to get legislation to make the traffic which uses and destroys these highways pay the cost and Great Britain has already gone into this as the latest taxes on trucks, etc., will show.

It is plain that the heavy freight trucking will have to pay for its use of the highways and help to maintain the roads built with public money.

Your Commissioners have had much evidence about motor truck competition with steam and electric lines. The motor truck is a factor in transportation to-day. One witness told of the "large number of failures" among motor trucking companies in the United States, without this traffic having to bear the cost of maintenance and reconstruction. The electric interurban railway thoroughly equipped, will not suffer very much from competition by motor traffic in passenger or freight. If the freight traffic on highways has to pay its fair share for the up-keep of the highways, the electric railway will not be affected by competition of motor-trucking.

FINANCIAL LIABILITIES OF PROVINCE: A great deal has been said about the indebtedness of the Province and its liabilities. Many absolutely fail to distinguish between a provincial liability for public utilities which are revenue producers, and which carry themselves on a basis of service at cost, and obligations of a different character.

How is it possible for municipalities in co-operation to finance great public utilities such as the generation and distribution of power without the backing of the Provincial Government, which pledges the people's credit for the enterprise, or to finance such a big public enterprise as the radial project.

Federal and Provincial Governments in the past have not been very backward in guaranteeing bonds, and pledging the credit of the people for enterprises which the citizens did not own or operate. There can be no regrets that the Ontario Government backed the municipalities which took the initiative in Ontario for the public ownership and operation of the generation and distribution of power.

It is much more difficult for the people of Ontario to own and operate provincial public utilities such as power or radials without the backing of the Government to raise the money in the initial stages.

Public utilities which carry themselves and pay for themselves in a period of years by a sinking fund process whereby they ultimately are owned completely by the people are not liabilities to shrink from, but enterprises in which the citizens may take a justifiable pride.

PROPOSAL OF MR. GUTELIUS: Mr. F. P. Gutelius, President of the Delaware and Hudson Railway, who was engaged by the Royal Commission to study the proposal and give evidence, presented to the Commissioners a most interesting document from which he read much of his evidence. It was not filed as an exhibit, but the Commissioners were given copies.

Mr. Gutelius took very strong exception to the Hydro Engineers' estimates of freight revenue, particularly on certain divisions. He described them as visionary and extravagant.

The President of the Deleware and Hudson Railway was, perhaps, the only expert among those severely critical of the estimates of revenue, who constructively proposed a solution. His document contains "Final Conclusions" which I include in the report at this point.

FINAL CONCLUSIONS.

GUTELIUS.

"112. After having made a personal examination of the various railways involved in this scheme and including the proposed lines to be constructed, and after having discussed the details with Engineer Fairlie of the Hydro Electric Commission and having studied the evidence thus far presented to the Commission, and having in mind the fact that many of the Municipalities have already voted upon this question, it would appear to me that the proper solution is as follows:

"113. TORONTO EASTERN: Sell the line to the Oshawa Street Railway Company or make an arrangement with them to operate it, or as much of it as appears to warrant and scrap the remainder.

"Toronto to give the Kingston Road radial a rapid city connection and take care of Ward Eight in so doing.

"114. TORONTO-ST. CATHARINES: Toronto to give York Radial a rapid city connection at Sunnyside.

"The Municipalities to build or finance a single track line Port Credit to Oakville, present lines to be improved for through service, and operate it in conjunction with or by the Hamilton and Toronto Lines. The GOVERNMENT TO GUARANTEE THE BONDS if Toronto provides rapid city connection and Hamilton do likewise.

"Hamilton Railway Lines to be extended direct to Burlington when business justifies.

"Beamsville line to be extended through to St. Catharines—municipalities to build or finance and have it operated by the Hamilton and St. Catharines Lines as can best be arranged. (Government to guarantee the bonds).

"Hamilton to Beamsville to be improved for through service.

"IN GENERAL: Provide sidings and perform such local freight business as can be secured along the line same as is being done by the present lines—including express, milk, mail, etc.,

"115. TORONTO SUBURBAN: City of Toronto to give the Toronto Suburban a direct rapid transit line into the business centre of Toronto.

"116. CITY OF TORONTO: City of Toronto to give the Metropolitan (Yonge Street to Lake Simcoe) a rapid transit line into the business centre of the city.

"117. The Toronto rapid transit scheme for suburban traffic will require some such scheme as the Hydro have worked up, but I question the advisability of terminating them all at Union Station account of congestion; better to have three smaller terminals near the business centre.

"118. Should Toronto not undertake this task itself rather than add another factor to the present complication? It is a great undertaking and the detail is a city matter."

Mr. Gutelius proposes to sell the Toronto Eastern to the Oshawa Street Railway Company or make an arrangement with them to operate it, or as much of it as it appears to warrant and scrap the remainder. Toronto is to give the Kingston Road Railway a rapid city connection and take care of Ward Eight in so doing. The Toronto Eastern belongs to the Canadian National Railways at present and it is understood that the Oshawa Electric Railway is really controlled by the Grand Trunk Railway and will pass to the ownership of the Canadian National Railways, so the same owner will possess both. Mr. Gutelius proceeds to construct the Toronto-St. Catharines Line in his own way. He advocates Toronto giving the York Radial a rapid city con-

nection at Sunnyside. From Port Credit to Oakville the municipalities are to build or finance a single track line and operate it in conjunction with or by the Hamilton and Toronto lines. This means, using the Sunnyside to Port Credit line and building a single track line from Port Credit to Oakville financed by the municipalities and note particularly ("The Government to Guarantee the bonds if Toronto provides rapid city connection and Hamilton do likewise") Connection is to be made at Oakville with the Oakville to Hamilton Line of the Dominion Power and Transmission Company, which at Burlington takes the long route around the Bay into Hamilton. At Hamilton, Mr. Gutelius proposes to proceed over the Hamilton-Beamsville line to Beamsville and extend the line from Beamsville to St. Catharines, to be built or financed by the Municipalities and have it operated by the Hamilton and St. Catharines lines as can best be arranged. Note again, the Government to guarantee the bonds for the extension from Beamsville to St. Catharines. Mr. Gutelius further suggests that the City of Toronto give the Toronto Suburban, which is the Toronto to Guelph line, a rapid transit line into the business centre of Toronto and suggests that the City of Toronto give the Metropolitan a rapid transit line into the business centre of the city.

He also states that the Toronto Rapid Transit scheme for suburban traffic, will require some such scheme as the Hydro have worked up and thinks there should be three smaller terminals near the business centre rather than one at the Union Station.

He asks, should Toronto not undertake this task itself rather than add another factor to the present complication? In this I believe he is referring particularly to suburban traffic.

Mr. Gutelius has in his conclusions practically built in his own way the Toronto to St. Catharines Line, proposes it should be improved for through service, advocates giving the Toronto Suburban entrance into the city from Guelph and suggests rapid city connection for the Toronto and York radials. He goes a long way towards constructing the radial scheme in his own way, and he must have considered it a paying proposition to do so. He may or may not have considered the difference in the gauges of the various railroads that he is dealing with and does not explain how the radials can get a rapid entrance into the centre of Toronto unless they have their own right-of-way as proposed by the Hydro Engineers. It is also significant that Mr. Gutelius proposes that the Government should guarantee the bonds for the municipalities, where he proposes to build connecting links on the Toronto-St. Catharines line.

It seems to me that in constructing a rapid transit interurban line from Toronto to St. Catharines the proposal of the Hydro Engineers is a much better one from every standpoint. Mr. Gutelius was a helpful critic, who frankly tried to solve the difficulties of the transportation situation.

BENEFITS TO STATE OF INDIANA FROM RADIAL RAILWAYS.

Mr. R. I. Todd, President and Manager of the Indianapolis Street Railway and several interurban lines which converge at Indianapolis, is quite positive that the radial railways have done more than any other factor to develop the State of Indiana. He declares in his evidence:—

PAGE 11962. "Q. It is a thing I want to come back to later on. Following up what Mr. Commissioner Bancroft was asking you a while ago about the necessity or advantage of your radial lines in Indiana, you would be the last, I suppose, to decry the benefit of those lines to the community? You do not suggest they have injured the State at all? A. I think they have been a tremendous advantage to the State; they have developed the State more than any other factor we have there, but at the expense of the private investor."

"Q. There is no question that the community has benefitted enormously from those lines? A. There is no question whatever about that.

"Q. And the State and the community which is so served would be a different sort of State and different community if those lines were not there? A. Yes, but it has been a very expensive proposition to the man that put his money in."

PAGE 11963. "COMMISSIONER BANCROFT: Q. Are the radials assisting in the development of the country districts in that territory around Indianapolis? A. Very much.

Q. They have not drained the country? A. No, they have helped the country and are developing a considerable population of their own; people who like to get out and live in the country on a ten acre or fifteen acre or twenty acre tract and go back and forth."

Mr. Todd points out that the Indiana Radial Railways are handling live stock and find it

"good business." During the first five months of 1921 to May 31st, 1373 cars were handled bringing a revenue to the system of $32,391. He declares that the farmers obtained the legislation making it possible to handle cars of live stock over the streets of Indianapolis. Mr. Todd states "The Farmers Association there went to the Legislature to make it a sure thing and had this Bill put through in an emergency session last summer."

PROPOSAL TESTED IN EVERY MANNER. The proposal of the Hydro Commission has been subjected to every test imaginable. It has been subjected to a test of car mile costs, operating ratio, earnings per mile of line and route for passenger and freight, fixed charges and other tests. Some of the evidence given was severely critical, and a great deal of the evidence helpful.

As a result, the Hydro Commission should be able to proceed in the radial project and by keeping down the capital cost because of lower prices in materials, develop the project in a safe and sound manner.

Many witnesses gave evidence of the great benefits they expected from the radials to their own municipalities. Not one of the municipalities which has approved the scheme complained or showed lack of confidence in the Hydro as trustees or in the project. Some of the municipalities are anxious about the possibility of the Provincial Government declining its guarantee of the Bonds.

The recommendations made in this report are, in my judgment, most reasonable ones, considering the mass of evidence both for and against the proposal, the reports of experts and the information gained personally by your Commissioners during their tours of investigation. The carrying out of these recommendations will be attended by great benefits to the people of the Province of Ontario.

RESPONSIBILITY FOR DELAY. The Inquiry has been an extended one. In one of the appendices attached to the majority report the procedure of the Commission is outlined. In fairness to the Hydro Engineers, your Commissioners ought to share to some extent, the responsibility for the length of the Inquiry. In the requisition sent to the Hydro Electric Commission asking for certain information, it was requested that the costs of operation and the revenues expected for each division, should be supplied for the first year of operation and for a five and ten year period following the first year of operation.

From the evidence it appears that the five and ten year period of operation is used in estimating probable revenues and re-valuing properties, where franchises have certain short periods to run, but may not be necessary in a case such as the radial proposals where franchises are not involved and the first year of operation is to be 1925. In addition, two of the five divisions are in operation now, without certain improvements proposed.

Without going further into this, it is quite certain that in projecting populations, revenues and costs of operation into long future periods, a great amount of work was entailed, and a field of speculation was entered whereby experts could disagree and an accurate checking up could hardly be made. It is unfair to accuse the Hydro engineers of "guessing" when they were compelled by us to enter these long future periods. And the work of the Arnold staff was extended by the same process.

RECOMMENDATION 1. THAT THE GOVERNMENT ADOPT THE PRINCIPLE OF PUBLICLY OWNED AND OPERATED ELECTRIC RADIAL RAILWAYS FOR THE PROVINCE OF ONTARIO.

There is ample evidence, in my opinion, that a system of radial railways such as proposed by the Hydro Electric Power Commission and in my judgment improved in some respects by the suggestions of experts testifying before the Royal Commission, will be of immense benefit to the territory involved and the province as a whole. The district to be served is the most favourable in Canada for the building of Radial Railways.

The Radial Railway Scheme proposed for Ontario consists of five divisions:

(1) The Toronto-St. Catharines Division,
(2) The Toronto Eastern Division,
(3) The Toronto Suburban Division,
(4) The Hamilton, Galt, Elmira Division,
(5) The Niagara, St. Catharines and Toronto Division.

DESCRIPTION OF LINES BY ENGINEER T. U. FAIRLIE OF THE HYDRO ELECTRIC POWER COMMISSION.

TORONTO EASTERN. "The Line commences at Bowmanville and extends westerly through the township of Darlington, through Oshawa and Whitby to Pickering. On this portion the original grading was done by the Toronto Eastern Railway giving a steel road as far west as Whitby. The grading, however, was completed to Pickering, but the steel was never laid on this latter portion extending west from Whitby. The location adopted by the Commission from Pickering westerly parallels in a general way the Kingston Road to the Grand Trunk crossing of the Kingston Road at Lot 13, Scarborough Township, and is located about midway between the original location projected of the Toronto Eastern and the Kingston Road, this location being considered more favourable than that projected by the original company. From the crossing with the Kingston Road the line extends westerly roughly paralleling the Grand Trunk and located a short distance north to the crossing of the branch line from Scarborough Junction to Markham and Stouffville. The line then diverges slightly roughly paralleling St. Clair Avenue to a crossing with the east branch of the Don River, then southerly through a thickly populated district of the City of Toronto to Ashbridge's Bay, over the right of way provided by the Harbour Commission into a connection at the foot of Church, Bay or York Street with the proposed uptown terminal. The estimates provide in the initial period of 1924 for the complete rehabilitation of the existing line of the Toronto Eastern Railway, and the new construction is noted in Exhibit 21 before the Radial Commission.

"It should be noted that a large amount of the capital expenditure is for the portion lying within the City limits and which is occasioned by the demand of grade separation by the City and the high speed line. To effect this certain heavy work is necessary even in the initial stages of operation, as is shown by the examination of the profile extending southerly from the upper Don branch. It is considered unnecessary for the time being to elevate the tracks on the Harbour Terminal until track conditions would warrant same, and the estimates are prepared on the lower grade line."

"TORONTO-ST. CATHARINES: The line extends westerly from a connection with the proposed uptown terminal at the foot of Bay Street, across the Harbour Commission's property, through the Exhibition Grounds to Sunnyside, thence westerly parallelling the Grand Trunk to Clarkson. From here, the line diverges slightly to the South passing through the centre of Oakville and to a proposed connection with the Hamilton Radial Railway. From Oakville the line parallels the latter to Burlington. In the event of the acquisition of this line this portion would be co-ordinated in the same. From Burlington the line extends westerly passing just south of Aldershot and effecting entrance into the City of Hamilton by paralleling the Grand Trunk right of way into the foot of James St. Through Hamilton two locations were estimated upon, one extending through on the Grand Trunk right of way providing for additional trackage, and the other an entirely independent line from any operation restrictions that the former might impose. From the east city limits of Hamilton the line extends easterly crossing the Grand Trunk at grade near Stoney Creek and roughly paralleling same through to Grimsby, where it diverges to the south and closely parallels the main highway through to a point about a mile and a half west of the Grand Trunk station at St. Catharines. Provision was made at the grade crossing of the Grand Trunk at Stoney Creek for its ultimate elimination. At St. Catharines a junction is effected with the Niagara, St. Catharines & Toronto Railway which it is proposed to use as a connecting link with the Frontier at Niagara Falls.

"NIAGARA-ST. CATHARINES & TORONTO RAILWAY. As already noted the acquisition of this system will provide a Frontier connection for the Toronto-St. Catharines Line, and, while it is intended for the time being to use the existing line between St. Catharines and Thorold, a location has been established which would eliminate many of the objectionable features which are now limiting factors in the operation of the system as a through line. The estimates provide for the necessary rehabilitation of this system to bring same up to the standard required as a through line and such other replacements or betterments as are considered necessary for the efficient operation of same. Negotiations have been conducted with certain American lines in order to effect an international connection at the Frontier, and the belief is warranted that such

may be effected, giving a direct connection with the centre of Buffalo, so that through passengers and freight may be efficiently handled from that centre to Toronto.

"WENTWORTH-WATERLOO DIVISION. The location extends west from the junction with the main line in the vicinity of the Desjardins Canal crossing the Grand Trunk at grade and undercrossing the cemetery and the Toronto Hamilton & Buffalo Railway. An alternative location, however, has been established which will provide for the elimination of the grade crossing with the Grand Trunk Railway. From the undercrossing of the T. H. & B. the line extends westerly up the Dundas Valley to Copetown, thence via Brockton, Sheffield to Galt, effecting a connection with the Grand Trunk Railway, Galt, Hespeler & Guelph branch, over which it is proposed to obtain running rights, and via a cross town connection with the Galt, Kitchener & Elmira branch of the Grand Trunk Railway, which it is proposed to acquire. This latter branch serves all the principal industries in Kitchener, and with slight expense can be arranged to connect with the principal industries of Galt. At Kitchener it is proposed by new construction to eliminate present operation over the main line tracks of the Grand Trunk. Below the Preston Yard of the Grand Trunk Railway across river connection is proposed in order to effect efficient train movement through Guelph via Preston to Kitchener and Galt. At Guelph a connection is proposed from a point near the Guelph Junction to the end of the line on Waterloo Road of the Guelph Radial Railway, thereby effecting a central passenger entrance into the centre of Guelph and a freight connection through the lower outskirts of Guelph with the Toronto Suburban.

"TORONTO SUBURBAN. It is proposed to acquire the existing line of the Toronto Suburban Railway Company extending westerly from Lambton to Guelph and the line extending from Weston to Woodbridge. Certain operations of the existing system now within the City of Toronto are essentially city operation and it is expected will be turned over to the City Transportation Commission for operation. It is intended by new construction to effect physical connection with both lines mentioned via the route of the Old Belt Line Railway in the Humber Valley with the main line extending west from Sunnyside by undercrossing the Grand Trunk Railway and ramping up to the grade elevation of the main line. This will then permit the cars of the Toronto Suburban Railway to traverse the entire distance within the urban area of Toronto at high speed."

NOTE. Included in Mr. Fairlie's summary is a resume of specifications for the various divisions.

DESCRIPTION OF LINES BY BION J. ARNOLD-EXHIBIT 206.

"TORONTO-ST. CATHARINES DIVISION. Plans for the Toronto-St. Catharines Division call for construction of a line from Toronto to Oakville acquisition of the present line of the Hamilton Radial Railroad from Oakville to Burlington and the construction of a new line from Burlington around Burlington Bay, through Hamilton to a point near St. Catharines where connection is to be made with the lines of the N.S. & T. Division."

"Connection is to be made with the Hamilton Elmira Division at Dundas Junction, about one mile north of Hamilton, so that through cars can be operated from the Galt district to Toronto. It is assumed in these estimates that arrangement swill be made with the International railway whereby it will be possible to operate through passenger trains from Toronto to Buffalo via the Toronto-St. Catharines and N. S. & T. Divisions and the International Railway.

"The total road mileage included in the estimates for this division is 72.77 miles, the track mileage being shown in Table B-5.

"In the item of rent of facilities under the heading of miscellaneous expenses there is included $30,000 per year to cover rental of a portion of the Grand Trunk Right of way in Hamilton. *There is available at the present time no information as to negotiations with the G. T. R. for the purpose of obtaining rights over this property.* However, it is estimated by the Hydro Electric Commission that an alternative location can be obtained at a cost of $500,000 and the rental provided is placed at 6% of $500,000 representing the maximum amount which could be justified as payment for the use of the G. T. R. property.

"TORONTO EASTERN DIVISION. Plans for the Toronto-Eastern Division call for construction of a new line from the foot of Bay Street in Toronto to Whitby where connection is to be made with the constructed portion of the Toronto-Eastern line from Whitby to Bowmanville, which is to be purchased from the Canadian National Railways. The section of line between Bay Street and the Don River ravine is to be double track and entirely grade separated.

In addition to the operation of an interurban passenger and freight service between Toronto and Bowmanville, it is proposed to operate a local rapid transit service from the Toronto Subway terminal to the Don ravine.

"The line as proposed is 43.83 miles long with estimated trackage as follows in 1925:

	1st Track.	2nd Track.	Yard Spurs.
New Construction	28.73 mi.	8.39 mi.	2.25 mi.
Purchased road	15.10 mi.	.....	.....
Total	43.83 mi.	8.39 mi.	2.25 mi.

Total single track 54.47 miles.

"TORONTO SUBURBAN DIVISION. The Toronto Suburban System as now operated consists of the Guelph Division providing an interurban service between Guelph and the Keele St. terminal located in West Toronto; the Woodbridge division, operating between Woodbridge and the Keele St. terminal; the Weston Line, operating over the same track as the Woodbridge line, but stopping at Weston; and the Davenport Crescent and Lambton routes which are essentially street car lines operating in the outskirts of Toronto.

"Estimates shown herein are based upon continued operation of the Woodbridge, Weston, Davenport, Crescent and Lambton routes as at present. The Guelph division cars, however, are to be operated directly into the downtown subway terminal through the construction, in 1925, of a connection from Lambton to the Toronto-St. Catharines Line, at Swansea, via the old Belt Line Railroad route.

"In addition to the service now operated, the estimates include operation of a suburban service over the main line from Toronto to Islington, a distance of 10 miles.

"The track mileage now operated by the Toronto Suburban system is as follows:

	1st Track	Sidings	Spurs
Lambton to Guelph	46.32 mi.	2.99 mi.	0.61 mi.
Weston, Lampton, Davenport and Crescent Lines	10.45 mi.	0.47 mi.	
Weston to Woodbridge	7.50 mi.	0.25 mi.	
Total present trackage	64.27 mi.	3.71 mi.	0.61 mi.
Additional track from Lambton to Swansea to be constructed by 1925	3.28	.....	.....
Total trackage 1925	67.55 mi.	3.71 mi.	0.61 mi.

"HAMILTON ELMIRA DIVISION. The proposed plans for the Hamilton Elmira Division call for construction of a new line from Dundas Junction, a point on the Toronto-St. Catharines Division about one mile north of Hamilton, to Galt, connecting at Galt with the present lines of the Grand Trunk Railway. It is proposed to purchase the Grand Trunk Branch line from Galt to Elmira, there obtaining access to Kitchener, Waterloo and Elmira; also to acquire trackage rights over the Grand Trunk line from Galt to Guelph, thus obtaining access to Preston, Hespeler and Guelph. In addition the construction of a new line from Puslinch Lake to the G. T. R. line is proposed. Operation of the Guelph Radial Railway comprising about 9 miles of local city trackage in Guelph, is included in this division.

"Excluding the Guelph Radial trackage, the length of road and track included in this division is as follows:

New Construction.	1st. Track Miles.	Sidings Miles
Dundas Junction to Galt	26.92	2.00
Connection G.T.R. line to Kitchener Street Rly. tracks	2.33	.....
Blair Jct.—Preston connection	1.36	.....
Connection from G.T.R. to Guelph Radial	0.78	.....
Puslinch Lake Line	3.07	0.14
Total new construction	34.46	2.14

G. T. Rly. lines to be purchased	25.05	6.41
Total lines owned	59.51	8.55
G.T.R. lines over which trackage rights are to be acquired	14.01	3.35
Total lines operated	73.52	11.90

"N. S. & T. DIVISION. The Niagara, St. Catharines and Toronto Railway is an electrically operated railroad handling both a freight and a passenger business in the territory surrounding St. Catharines and Niagara Falls, Ontario. The mileage of the various branches are as follows:

Main line, Port Dalhousie to Niagara Falls	16.74 miles
Welland Division, Thorold to Port Colborne	18.53 "
Lake Shore Division, St. Catharines to Niagara on Lake	12.18 "
St. Catharines local lines	9.59 "
Niagara Falls local lines	4.63 "
Total Main Line	61.67 "
Industrial sidings	13.47 "
Yard and passing sidings,	8.23 "
Total mileage	83.37

"This railway interchanges freight with the Toronto, Hamilton & Buffalo Ry., Michigan Central R.R., Grand Trunk Ry., and Wabash R.R., and serves as a terminal railway for most of these roads.

"It is proposed to purchase this road and to connect it with the Toronto-St.Catharines Division at St. Catharines. Thus the Hydro Electric Railways will secure an outlet to the Frontier. Thorold and Niagara Falls, and also secure the advantages of an established freight terminal railway having sidings to most of the plants in this important industrial area.

"The N. S. & T. railway at present is single tracked, and inasmuch as it is proposed to operate the through limited service from Toronto over this line to Niagara Falls, it is necessary to double track the line from St. Catharines to Thorold in 1925 and to double track the remainder from Thorold to Niagara Falls in 1930. The cost of this track is included in capital cost."

COSTS OF CONSTRUCTION. The Costs of Construction have not been questioned by any expert called to give evidence. It was generally agreed that ample money had been provided to build the railways proposed by the Hydro Commission.

The cost of construction, as submitted to the Government, and included in the Statement of July 6th, 1920, amounts to $51,870,231. This included the cost of the Port Credit to London Division. In the estimates submitted to the Royal Commission, the Toronto-Guelph division is definitely substituted for the Port Credit to London Line.

The cost of construction for the five divisions submitted by the Hydro Engineers during the investigation, amounts to $45,644,139, or a reduction of $6,226,092.

The cost of construction submitted by the Arnold engineers during the investigation, totals $40,753,500, or a reduction of $11,116,731, from the total as submitted to the Government.

The Arnold estimate of $40,753,500 is without the addition of a subway to be constructed in Toronto. It is more feasible at present, in my opinion, for the Hydro Commission to arrange with the City Transportation Commission, for a means of bringing passengers North from the Bay Street Terminal. These estimates of cost are for the first year of operation, 1925.

A comparison is made between the estimates of capital cost showing the reductions:

CAPITAL COST

FIRST YEAR OF OPERATION — 1925

RADIAL RAILWAY DIVISIONS Government Statement of July 6th, 1920	Cost as submitted to Government for approval and contained in Government Statement of July 6th, 1920.	Cost as submitted to Royal Commission by Hydro Engineers during Investigation.	Cost as submitted to Royal Commission by Bion J. Arnold & Staff and contained in Arnold Report including subway Terminal in Toronto.	Cost as submitted to Royal Commission by Bion J. Arnold & Staff contained in Arnold's Report not including subway Terminal in Toronto.
(1) TORONTO, PORT CREDIT, ST. CATHARINES LINE:— Estimated cost of construction as revised by Mr. W. S. Murray, Consulting Engineer of New York City and brought down to date.	$22,298,635	$20,603,953 (Ex. 51)	$19,580,000	$17,850,000
(2) TORONTO EASTERN RAILWAY:— (Toronto to Pickering, Whitby, Oshawa and Bowmanville); Estimated cost of construction including right-of-way and partial grading to be acquired from Dominion Government at a cost of $706,000 (Estimates made Sept. 1919)	8,360,794	9,164,187 (Ex. 34)	9,794,000	8,189,000
(3) THE HAMILTON, GALT, GUELPH, ELMIRA LINE:— Estimated cost of construction. (Estimates made November, 1919)	6,530,659	7,192,895 (Ex. 55)	6,002,500	6,002,500
(4) THE PORT CREDIT TO LONDON LINE: Estimated cost of construction, (Estimates made in 1916)	8,499,769	.....	.....	.....
(5) THE TORONTO SUBURBAN LINE:— (Toronto to Woodbridge and Toronto to Guelph)	.....	3,591,774 (Ex. 67)	4,222,000	3,752,000
(6) THE NIAGARA ST. CATHARINES LINE:— (Niagara Falls, St. Catharines and Port Colborne.) These two systems to be acquired from the Dominion Government at a cost of	6,170,374	5,091,330 (Ex. 69)*	4,960,000	4,960,000
	$51,870,231	$45,644,139	$44,558,500	$40,753,500

REDUCTION IN CAPITAL COST
FIRST YEAR OF OPERATION—1925

Capital cost as submitted to Government by Hydro Commission	$ 51,870,231
Capital cost as submitted to Royal Commission by Hydro Engineers	45,644,139
REDUCTION IN COST	$ 6,226,092
Capital cost as submitted to Government by Hydro Commission	$ 51,870,231
Capital cost as submitted to Royal Commission and contained in Arnold Report. Exhibit 206 which includes subway Terminal in Toronto	44,558,500
REDUCTION IN COST	$ 7,311,731
Capital cost as submitted to Government by Hydro Commission	$ 51,870,231
Capital cost as submitted to Royal Commission and contained in Arnold Report. Exhibit 208 not including subway terminal in Toronto	40,753,500
REDUCTION IN COST	$ 11,116,731

*Exhibit 69. The cost of construction on the N.S. & T. Division is taken as of 1926, this being the nearest to 1925 in the exhibit, where five year periods are used as of 1921-1926-1931.

One great difference in Capital Cost as between the amount submitted to the Government and the cost of the scheme as submitted to the Royal Commission is the definite elimination of the Port Credit to London Division and the inclusion of the Toronto Suburban Division. Other major reductions as contained in Hydro exhibits and Arnold Reports are due to changes in construction and right-of-way and declining costs during the past year.

There cannot be any reasonable criticism of the Hydro engineers for changing at various times, their estimates of capital cost. It is proposed to save nearly $3,000,000 by using the Grand Trunk Railway right of way through Hamilton instead of adhering to the original plan of entrance into and through Hamilton on a separate right of way. It is evidence of the spirit of co-operation, to use the right of way of the National Railways to save construction costs. It is obvious that the Hydro Commission contemplated this when the Grand Trunk Railway was a privately owned corporation, and the plan was made possible by developments which have taken place since the original estimates were made, whereby the Grand Trunk Railway has passed into the possession of the Canadian National Railways.

During the last few years, cost of construction mounted upward until the peak was reached in the latter half of the year 1920. Passenger and freight rates changed by various increases being made.

These considerations, among others, compelled the Hydro engineers to bring their estimates up to date during the investigation.

The Arnold engineers, who submitted their report at a much later date, were able to take advantage of lower costs.

It has been urged that the cost of construction per mile of line is too high, compared with other electric railways. In the cost of construction, the fundamental differences between the proposal submitted to your Commissioners and other electric railways appear strongly.

The Hydro Commission proposes to construct the Toronto-St. Catharines division through Toronto to the terminal, entirely on its own right of way, and similarly the Toronto Eastern Division. The Toronto-St Catharines division is to have its own right of way through Hamilton alongside the Grand Trunk Railway tracks, with a terminal in Hamilton.

The heaviest expenditures per mile of route are for construction inside the City of Toronto and Hamilton. From the west side of the Humber to the south end of the upper Don Bridge, a distance of 11.29 miles of route, Engineer Fairlie states, in Ex. 139, that the total cost is $7,694,739, or $681,553 per mile of route.

Mr. Fairlie also states in his evidence "In the Hamilton section for the 4.33 miles, it is $1,453,250 in the present report" or approximately $325,623 per mile of route.

Comparisons have been attempted during the Inquiry by taking the total cost of the Hydro Project, dividing it by the route mileage to obtain a cost per mile, and then comparing the result with the cost per mile of interurban roads in the United States. A similar comparison has been attempted by taking the divisions separately and comparing them with other electric railways. Such a comparison is absolutely unsound, although it evidently greatly impressed the Commissioners who signed the majority report.

The unsoundness is at once apparent when it is considered that the interurban railways entering Detroit do so over the city street railway tracks, and that the interurban railways enter Cleveland over the city surface tracks. This is also the case in Indianapolis, Washington, Baltimore, Toledo and the general practice in most United States cities. With rare exceptions, the costs of construction of United States interurban railways, are costs for constructing those railways outside of city boundaries. The factor, in my opinion, preventing interurban electric railways in the United States from obtaining entrance into the main city terminals over their own right of way, is the cost and difficulty of procuring a right of way after the city has grown beyond a certain stage.

A similar condition will be met by Toronto and Hamilton if the present opportunities are not grasped.

In Ex. 139, Engineer Fairlie gives the mileage and expenditures in Toronto East and West:

From Ex. 139, "Cost of proposed Hydro Electric Power Commission Railway through Toronto from West side of Humber to South end of Upper Don bridge.

	As submitted to Municipalities.	
	Miles	Amount
"Toronto-East	5.9	$3,462,812
Toronto-West	5.36	4,195,651
TOTAL	11.32	$7,658,463

NOTE:—This total should read 11.26. This is probably due to a typographical error in Ex. 139 wherein 5.9 should be 5.96.

	As submitted to Municipalities. Miles	Amount
"Toronto-East	5.96	$3,462,812
Toronto-West	5.25	5,882,242
TOTAL	11.21	$9,345,054

	As submitted to Radial Commission as 1924 programme. Miles	Amount
"Toronto-East	6.04	$3,754,669
Toronto-West	5.25	3,940,068
TOTAL	11.29	$7,694,737

"Approximate cost of work submitted to Radial Commission if price had not increased from date of estimates submitted to municipalities:

	Amount.	Increase due to Increased prices.
"Toronto-East	$3,229,015	$525,654
Toronto-West	3 073,253	1.866.815
TOTAL	$6,302,268	$2,392,469

"Approximate decrease due to difference in construction quantities.

Toronto-East	$ 233.797	(Due partly to cutting out grade separating at six crossings)
Toronto-West	$1.122,398	(Due to cutting out steel viaduct and subway through Exhibition)
TOTAL	$1.356,195	

In one of the appendices attached to the majority report, Price Waterhouse & Co., compare the cost of construction per mile of route for the proposed radials, with four interurban railways in the United States, under "Estimated cost or book value of Ways, Structures, Equipment, etc."

	Cost per mile.
Proposed Hydro Electric Radials (all lines)	
Year 1925. (Miles of route, 327,797)	$139.248 00
Washington, Baltimore and Annapolis, Year 1919, (Miles of route, 61.92)	$175,116 00
Lake Shore Electric Railway of Ohio, Year 1919. (Miles of route, 151.49)	$ 93.840 00
Union Traction System of Indiana, Year 1919. (Miles of route, 427.20)	$ 54,738 00
Mr. Rifenberick, in his report, states that the cost per route mile for the Detroit-Munro-Toledo line in 1920, is	$132,280 00
The Arnold engineers in Ex. 208 place the cost per mile of route for lines owned by Hydro Commission in the proposal as,	$129.212 00

In a comparison following, made by Price Waterhouse Company, expenditures for 11.29 miles in Toronto and 4.33 miles in Hamilton are taken out of the capital cost, to obtain an approximate comparison with several other electric railways. This is not all the expenditure to be made in Toronto and Hamilton, but portion relating to capital cost which could be segregated. Approximately, it reduces the cost $23,000 a mile over the whole system. If this reduction is applied to the Arnold estimate Exhibit 208, of $129.212, the cost per mile of route would be $106,-212 for the radial scheme.

STATEMENT SHOWING ESTIMATED COST OF THE PROPOSED HYDRO ELECTRIC RADIALS PREPARED FROM ESTIMATES SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION, AFTER MAKING CERTAIN DEDUCTIONS; AND COMPARING THE REVISED COSTS WITH THOSE OF CERTAIN LINES IN THE UNITED STATES.

	Proposed Hydro-Electric Radials—All Lines	Washington, Baltimore and Annapolis Railway	Lake Shore Electric Railway of Ohio	Union Traction System of Indiana	Detroit, Monroe and Toledo Short Line Railway
Year	1925	1919	1919	1919	1920
Route Miles	312.177	61.92	151.49	427.20	48.12
CAPITAL COST	$36,496,097 00	10,843,283 00	14,161,653 00	23,384,002 00	6,365,402 00
COST PER MILE OF ROUTE	116,900 00	175,116 00	93,840 00	54,738 00	132,282 00
	1.		2.		3.

NOTES:—1. Items marked 1. represent Hydro Electric Power Commission estimates, revised as follows:—

	Route Miles	Cost
Estimated cost of Construction as submitted to the Radial Railway Commission	327.797	$45,644,084 00
Less—That portion of the cost of entering Toronto on the Toronto, Hamilton, St. Catharines Line and the Toronto Eastern Line, set forth in Exhibit No. 139	11.29	7,694.737 00
That portion of the cost of entering Hamilton on the Toronto, Hamilton, St. Catharines Line mentioned by Mr. T. A. Fairlie in his evidence, page 11, 272	4.33	1,453,250 00
	15.62	$9,147,987 00
Leaving as above	312.177	$36,496,097 00

2. Items marked 2. represent a line that is entirely single-track.

3. Items marked 3. represent data taken from R. B. Rifenberick's report prepared for the Radial Railway Commission. Exhibit No. 228, page 45.

It will be noticed that interurban lines in the United States, as mentioned, without the large terminal costs, and built when prices were much lower, do not make the Hydro costs suffer by comparison; and it was generally admitted that in construction and equipment the proposal is of the highest class. Estimated costs are reasonable and sound, and construction costs, being on a downward trend, will help to further strengthen the estimates.

REVENUE AND SURPLUS

The evidence of Chief Engineer Gaby of the Hydro Electric Power Commission and other officials of the Commission is that the system as a whole will be more than self-supporting the first year, earning a net surplus the first year of operation in 1925

This view is strongly supported by Bion J. Arnold, Consulting Engineer of Chicago, one of the most eminent experts called to give evidence before the Commission. Mr. Arnold was assisted by a staff of officials, the chief of whom, Mr. Fred Sager, gave evidence during the inquiry. Mr. Arnold and his assistants made the most thorough study of the scheme and comprehensive report thereon, of any expert who appeared before the Royal Commission, other than the engineers of the Hydro Commission.

The Engineers of the Hydro Commission and the members of the Arnold Staff, to obtain their various estimates, studied the territory carefully, the population tributary to the proposed radials, the industries, made freight surveys, studied the passenger movements at various points, made counts of the people riding at various points to obtain estimates of riding and have analyzed carefully, all those details which would make estimates a real guide on which to base judgment.

A mass of evidence has been given by various experts from the United States about the earnings per mile of line or route on various interurban electric railways. The engineers of the Hydro Commission and the Arnold Staff claim, that the earnings are not comparable unless the various physical advantages in the proposal for Ontario are considered. Their claim is well founded and justified by the evidence.

The revenue and surplus in each of the Hydro and Arnold estimates for the periods 1925, 1930, and 1935 are here shown, followed by a comparison of earnings per mile between the Hydro and Arnold estimates and interurban railway in the United States. Taking into consideration the advantages of a right of way into main terminals such as Toronto and Hamilton for the Hydro project with many other advantages outlined in this report, it will appear how reasonable are the expectations in connection with the Hydro scheme.

REVENUE AND SURPLUS
FIRST YEAR OF OPERATION—1925

Submitted by Hydro Engineers to Royal Commission and contained in Exhibits 51, 34, 67, 55, 69.

	Operating Revenue	Surplus
All Divisions	$8.083.881	$807.642

Submitted by B. J. Arnold and Staff, and contained in report Exhibit 206, including subway terminal in Toronto.

	Operating Revenue	Surplus
All Divisions	$7.507.000	$252.000

Submitted by B. J. Arnold and Staff, and contained in report Exhibit 208 not including subway terminal in Toronto.

	Operating Revenue	Surplus
All Divisions	$7.086.000	$213,000

The revenue and surplus included in statement above for the N. S. and T. Division as submitted by the Hydro Engineers are for 1926 being the nearest estimate to 1925 in the exhibits. The five year periods on this line were taken as 1921-1926 and 1931 in Hydro estimates.

REVENUE AND SURPLUS
ESTIMATES OF OPERATION DURING YEARS
1930—1935.

Submitted by Hydro Engineers to Royal Commission and contained in Exhibits 51, 34, 67, 55, 69.

	1930 Operating Revenue	1930 Surplus	1935 Operating Revenue	1935 Surplus
All Divisions	$9,818,605	$1,493,089	$11,264,355	$1,774,471

Submitted by B. J. Arnold and Staff, and contained in report Exhibit 206, including subway Terminal in Toronto.

	Operating Revenue	Surplus	Operating Revenue	Surplus
All Divisions	$9,141,000	$ 796,000	$10,880,000	$1,037,000

Submitted by B. J. Arnold and Staff, and contained in report Exhibit 208, not including subway Terminal in Toronto.

	Operating Revenue	Surplus	Operating Revenue	Surplus
All Divisions	$8,628,000	$ 698,000	$10,254,000	$ 905,000

The Hydro estimates for Toronto Eastern are for the years 1929-1934, and these have been included in total above as of 1930-1935, to make a comparison with Arnold's estimates of 1930-1935. The Hydro Toronto Suburban estimates are for periods 1921-1925-1930, and the totals for 1930 have been used for both 1930 and 1935 in above table. The Hydro Niagara St. Catharines and Toronto estimates are for periods 1921-1926-1931 and the totals in the 1931 estimates have been used in table above for 1930 and 1935. The total sum provided for all divisions in the Arnold report, Exhibit 206, as sinking fund for 1935, is less by $14,750 than the amount provided by Hydro estimates for 1935, including the amount provided in 1934 on Toronto Eastern and in 1931 on the Niagara St. Catharines and Toronto Division, and using these amounts for 1935. The difference will affect the relation of the surpluses shown above.

EARNINGS PER MILE OF LINE OR ROUTE
FIRST YEAR OF OPERATION—1925.

RADIAL RAILWAY DIVISIONS	Miles of Line Operated			Revenue Per Mile of Line or Route					
				Interurban Earnings	Suburban Earnings	Total Passenger Earnings	Freight	Miscellaneous	Total
Proposed Hydro-Electric Radials (Analysis by Price, Waterhouse Co.)	327.797 route miles					15,064	8,779	820	24,663
Extract from Exhibit 206 Arnold Report, Table No. 2 Showing "Analysis of Revenue Estimates per mile of line" (Total without duplications) (C)	330 route miles			11,000	27,400		7,800	400	22,800
1925	Interurban	Local and Suburban	Total						
Toronto-St. Catharines	74	10 (a)	74	18,900	33,700		14,800	500	38,800
Toronto-Eastern	44	7 (a)	44	10,200	93,300		4,200	500	29,600
Toronto-Suburban	55	30 (b)	74	5,200	14,000		2,300	200	11,500
Hamilton-Elmira	73	9	82	8,100	11,800		4,800	300	13,000
N. S. & T.	48	14	62	12,900	16,800		10,500	800	22,800
Total	294	70	336						
Total without Duplications (c)	288	64	330	$11,600	$27,400		$ 7,800	$ 400	$22,800

(a) Included also in interurban mileage.
(b) 10 miles also included in interurban mileage.
(c) All mileage figures represent mileage operated by each line and each class of service. On each division, both revenue and mileage are calculated through to the primary or secondary terminal. So far as mileage is concerned, therefore, the divisions overlap. Thus the Toronto Suburban operates over the Toronto-St. Catharines Division from Swansea to Toronto and the Hamilton-Elmira operates over Toronto-St. Catharines tracks from Dundas Junction to Hamilton. The mileage "Total without duplication" eliminates this overlap so that the total revenues per mile apply to the actual total mileage of the system."

EARNINGS PER MILE OF ROUTE OF PROPOSED HYDRO RAILWAYS COMPARED WITH INTERURBAN ELECTRIC RAILWAYS IN THE UNITED STATES

RADIAL RAILWAYS	Route Miles	Year of Operation	Total Passenger Earnings	Freight	Miscellaneous	Total
Proposed Hydro Electric Radials (analysis by Price, Waterhouse & Co.)	327.797	1925	15,064	8,779	820	24,663
Proposed Radials, Extract from Table No. 2, (Arnold Report, Exhibit 206 including subway terminal in Toronto)	330.	1925	14,600	7,800	400	22,800
Proposed Radials, Extract from Exhibit 208, Arnold Report, (not including Subway Terminal in Toronto)	330.	1925	14,157	7,315 (Includes miscellaneous)		21,472
Washington, Baltimore & Annapolis	61.92	1919	31,777	2 712	526	35,015
Washington, Baltimore & Annapolis (Analysis by Price, Waterhouse & Co.)	61.92	1920	28,885	3 659	1,246	33,790
Chicago, North Shore & Milwaukee; C. E. Thompson, Assistant to the President—Evidence pages 7767-8	104 (including Branches)	1919	29,202	2,321	658	32,181
		1920	34,349	4,533	424	39,306
Detroit, Munroe & Toledo, R. B. Rifenberick, Ex. 228	58.41 Freight 51.72 Passenger	1920	22,915	6,123	1,095	30,941 *
Detroit, Jackson & Chicago, R. B. Rifenberick, Ex. 228	106.74 Freight 99.07 Passenger	1920	12,512	3,488	717	16,993 *
Union Traction Co. of Indiana, R. B Rifenberick, Ex. 228	56.47	1920	11,945	3 467	1,057	16,469
Terre Haute, Indiana and Eastern Traction Co. Terra Haute Indianapolis Line, R. B. Rifenberick, Ex. 228	72.04	1920	9,511	1,809	1,002	12,322
Northern Ohio Traction Light Co. Analysis by Price, Waterhouse & Co.	172.70	1919	33,135	2,011		35,146
Lake Shore Electric Railway, R. B. Rifenberick, Ex. 228	171.49	1920	10,838	4,380	1,404	16 622
Aurora-Elgin-Chicago, C. E. Bailey's Exhibit 175	64.	1919	18,118	2,486	2,605	23,209
Rapid Railway System.—Main Line Detroit United Lines. R. B. Rifenberick, Ex. 228	75.07 Passenger 79.07 Freight	1920	16,021	2,287	1,918	20,396 *

* These totals apparently include small miscellaneous items not specified above.

PASSENGER EARNINGS: The comparison previously made indicates the reasonable expectations of the Hydro engineers and the Arnold engineers in passenger earnings for 1925. The total population to be served by the radials has been carefully estimated, and the increases allowed for future years based on a knowledge and study of the territory. The projecting of populations into the future by periods, gave great scope for disagreement between experts. Most of the evidence given on interurban passenger traffic was measured in terms of per capita earnings, or, how much in dollars and cents per year for each person included in the population served, is earned on electric railways in operation, as compared with the expectations of the Hydro engineers for this project. There is not much dispute about the rule, for making estimates of earnings for electric railways by using $2\frac{1}{2}$ miles on each side of the railway as a basis, and the population in that area as tributary.

There is dispute as to whether main terminal populations should be excluded or included, or what portion should be included.

Mr. T. A. Wilkinson, one of the engineers of the Hydro Commission, presented in Exhibit 220, a comparison of interurban lines between a Detroit-Cleveland district covering electric interurban railways, and a district including all the divisions of the proposed radials and the high speed electric line of the International railway to Buffalo. Ex. 220, a map showing all the lines included, is attached as an appendix to this report.

Mr. Wilkinson explains in his evidence, the object of the table Ex. 221, accompanying the map, as follows:

PAGE 11386.

"A. The object of the table is to make a comparison of the interurban revenues, per capita, and in other units, of the system which was selected, as the Detroit, Cleveland combination of lines which was selected as the most comparable system; the lines comprising that system do not include in their revenue statement and in their interurban earnings, as reported the revenue of city mileage; in all cases the interurban operation over the city tracks, the interurban companies or electric companies, the fares are taken in the city, and in one case the suburban section outside the city, are taken by the city company; there is no revenue accruing on the mileage of the main terminal to the interurban company. Therefore in order to establish a comparison I have limited the figures for the Hydro System to the amount of revenue earned on the equivalent basis....."

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"Q. Then taking that system have you ascertained the population tributary to those lines, series of lines, and on what basis of area has that tributary population been taken? A. The population estimate has been made for each line or division, each system included in the Detroit-Cleveland, that is each line a population estimate has been prepared.

Q. What is the distance on each side of the line?

A. On the basis which has been used in the Hydro estimate of $2\frac{1}{2}$ miles on each side of the line."

In the table, Exhibit 221, the engineer first makes a comparison of per capita earnings, based on the population of the Detroit-Cleveland combination, leaving out the populations of the main terminal cities, Detroit and Cleveland, with a "Hydro System and International Railway" combination leaving out the populations of Toronto and Buffalo, and in a second statement (Exhibit 223) he includes all the terminal populations to obtain a comparison of interurban earnings per capita between the two combinations.

In Exhibit 221 it is shown that the earnings per capita for the "Hydro System and International Railway (High Speed Line)" is $7.77 and for the Detroit-Cleveland combination $8.12. In the second comparison, Exhibit 223, the earnings per capita on the "Hydro System and International Railway (High Speed Line)" is $2.33 covering a population of 1,650,245 and in the Detroit-Cleveland combination $3.25 for a population of 2,996,381.

The comparison made of passenger earnings was the most extensive of any presented during the investigation.

The tables are included in detail.

EXHIBIT 221.
HYDRO RADIAL RAILWAYS
COMPARISONS JUSTIFYING VARIOUS ESTIMATES
Submitted to
RADIAL RAILWAY COMMISSION
INTERURBAN PASSENGER SERVICE

SYSTEM	Year	Interurban Route Miles	Population Served	Interurban Revenue	Population Per Mile	Revenue Per Mile	Revenue Per Cap.
WHOLE HYDRO SYSTEM	1925	271.	422,502	2,972,815	1,559	10,970	7.04
Detroit Cleveland	1920	593.43	1,205,806	9,794,173	2,032	16,504	8.12
Northern Ohio Traction	1920	131.23	465,721	3,372,446	3,549	25,699	7.24
TORONTO-ST. CATHARINES, HAMILTON-WATERLOO & GUELPH, NIAGARA, ST. CATHARINES AND TORONTO	1925	181.4	357,143	2,548,474	1,973	14,049	6.89
Northern Ohio Traction	1920	131.23	465,721	3,372,446	3,549	25,699	7.24
TORONTO, ST. CATHARINES—Whole Line	1925	64.	197,275	1,123,451	3,082	17,554	5.69
Northern Ohio Traction	1920	131.23	465,721	3,372,446	3,549	25,699	7.24
Northern Ohio Traction, Cleveland to Canton only	1920	52.	345,153	2,027,963	6,638	38,999	5.88
Lake Shore Electric—Cleveland Division	1920	60.	87,715	926,760	1,462	15,446	10.57
TORONTO, ST. CATHARINES—Toronto to Hamilton only	1925	40.	153,315	834,721	3,833	20,868	5.45
N. O. T. Cleveland to Akron	1920	28.	240,082	1,329,039	8,574	47,466	5.54
TORONTO EASTERN	1925	37.79	31,208	328.000	828	8,680	10.51
Detroit Jackson & Chicago	1920	95.1	112,120	1,170,359	1,179	12,307	10.44
HAMILTON, GUELPH, ELMIRA	1925	66.7	97,424	762,447	1,461	11,430	7.83
Northern Ohio, South of Akron only	1920	103.	225,638	2,043,407	2,190	19,839	9.06
Niagara, St. Catharines & Toronto	1920	50.7	52,834	431,547	1,042	8,512	8.16

HYDRO SYSTEM AND INTERNATIONAL RAILWAY—HIGH SPEED LINE
compared with—DETROIT-CLEVELAND COMBINATION.

HYDRO & INTERNATIONAL	Interurban Earnings	Population Served	Revenue Per Cap.
Hydro System (1925)	$2.972,815	422 502	7.04
High Speed Line (1920)	864,493	70,968	12.20
Cleveland-Detroit:	$3,837,308	493,470	7.77
D. U. R. Lake Shore N. O. T. (1920)	$9,761,195	1,205,806	8.12

"EXHIBIT 223

HYDRO SYSTEM AND INTERNATIONAL RAILWAY
(HIGH SPEED LINE)
compared with
DETROIT-CLEVELAND COMBINATION

1. Hydro and International	Interurban Revenue	Population Served	Revenue per cap.
Hydro System, 1925	$2.972,815	422,502	$7 04
High Speed Line, 1920	864,493	70,968	12 20
	$3,837,308	$493,470	$7 77
Add Buffalo (1920)	.....	506,775	.....
		1,000,245	3 84
Add Toronto (1925)	.....	650.000	.....
		1,650,245	2 33
2. Detroit-Cleveland			
D.U.R. Lake Shore N.O.T.	.....	1,205,806	8 12
Add Cleveland (1920)	.....	796,836	.....
		2,002,642	4 88
Add Detroit (1920)	.....	993,739	
		2,996,381	3 25
Interurban Revenue	$9,762,195	.....	.....

To obtain the estimates of suburban earnings the engineers of the Hydro Commission and the Arnold Staff had "counts" made of passenger travel in the eastern portion of Toronto and at Sunnyside; had the advantage of ascertaining the traffic on the three divisions of the Toronto and York Radials, north, east and west of the city; studied most carefully the loading of the cars, and presented in detail the results of these studies. Heavy suburban traffic is in existence now, and the proposed scheme of radials will develop it greatly. There is no serious evidence to refute the great possibilities of suburban traffic around Toronto. The radials will have the immense advantage of being able to provide a rapid suburban service from and to the Toronto terminal.

To show the care used in estimating future populations, the Hydro Commission presented Exhibit 226 to show estimates made and actual populations in certain places for 1921.

"EXHIBIT 226.

POPULATION OF HYDRO RADIAL TOWNS.
COMPARISON HYDRO ESTIMATED POPULATIONS FOR 1921, WITH RETURNS RECEIVED FROM MUNICIPAL CLERKS SUBSEQUENT TO ESTIMATE.
URBAN MUNICIPALITIES.

	Estimated.	Actual.
"Bowmanville	3,050	3,250
Burlington	2,400	2,438
Humberstone	1,400	1,552
Mimico	3,200	4,187
Oakville	2,900	3,120
Port Credit	900	1,044
Weston	2,650	3,104

TOWNSHIP MUNICIPALITIES.

"Beverley	3,100	3,256
Barton	6,400	6,742
Chinquagonsy	3,200	3,351
Darlington	3,450	3,541
Eramosa	2,200	2,234
West Flamboro	2,400	2,557
East Flamboro	2,550	2,624
Humberstone	1,900	1,936
Nelson	2,600	2,827
Pelham	2,600	2,683
Puslinch	2,250	2,327
Pickering	4,150	4,457
Saltfleet	4,300	4,519
East Whitby	3,300	3,747
Whitby	1,600	1,785"

FREIGHT EARNINGS. In the comparison of earnings previously made it is clear that the Hydro engineers and Arnold engineers expect to develop freight earnings in excess of any interurban railway mentioned in tthe table. This is reasonable considering the evidence from every standpoint. The railways are to be built and thoroughly equipped to carry on a regular freight business. Two of the divisions are in actual operation, the Niagara Central Lines and the Toronto-Guelph Suburban Railway.

The Niagara Central division hauled 355,144 tons of freight over the lines in 1919, according to the evidence of Mr. Arnold.

Mr. Carroll Bailey, of the J. G. White Engineering Corporation, states in his report, Ex. 175, in explaining that in 1919 the Niagara Central Lines obtained a freight revenue of $305,515, and in 1920 of $310,698 exclusive of mail, express and miscellaneous freight:—

"The comparatively large freight earnings are due to the railway's advantageous location near numerous industries, and to an arbitrary division of the through rate between it and the connecting railways near Welland, where the large portion of the tonnage is delivered and received, giving the longest haul possible to the Niagara, St. Catharines and Toronto Railway, and giving these connecting railways access to plants not otherwise reached." The Niagara Central lines and Toronto Suburban Railway will be connected to a system of five divisions.

In addition, the expectations of freight are based upon extensive surveys made by members of the staff of the Hydro Commission, of freight movements in the territory, confidential canvasses made of industries in the territory as to the freight business Hydro Radials might be expected to get, the development of new business, interchange of freight with steam railway lines, the acquisition of the Galt-Kitchener-Elmira line from the Grand Trunk Railway thereby providing a direct frontier connection for Kitchener, Elmira, Preston and Hespeler through Hamilton, and many other details considered relevant by the engineers.

The Arnold staff made a survey of their own to check the Hydro freight estimates, and during the investigation another freight survey was made under the direction of the Hydro engineers to again check freight estimates.

Several errors were found in the original freight surveys of the Hydro officials and these were later checked again by the Arnold staff and the net surplus was reduced thereby in the Arnold report by $34,450.

Not one of the experts suggested that anything more could be done than the Hydro engineers and Arnold engineers had done to more thoroughly do the work. The experts who were called in to give evidence had the full advantage of all the information given in evidence by Messrs. Gaby, Hewson, and Fairlie.

There was great doubt expressed, as to whether the Hydro Commission could get for the radials an interchange of freight traffic with the Canadian National Lines. This is a very important point, and Mr. Gutelius expressed grave concern about the "onerous nature" of the provisions regarding any interchange of freight traffic which may be included in the agree-

ment to purchase the three divisions included in the Radial scheme. Hon. Dr. Reid, Minister of Railways, in his evidence, indicates how needless are the fears of the experts and how well-founded are the expectations of the Hydro engineers in this respect.

PAGE 2427 F. P. GUTELIUS. "Q. You said something about an agreement having yet to be made—I just want to follow that up—between the Government who are selling or propose to sell this property to the Hydro. Just explain what you mean in that connection? A. In Dr. Reid's letter to Sir Adam Beck, quoted in Mr. Murray's report, he says:

" 'In order that the road be constructed as a feeder for the Canadian National Railway System as originally intended.' "Q. Yes? A. Now, my knowledge of Dr. Reid—I served under him for some time as Acting Minister of Railways, tells me he meant that very thing, that when the time comes to make the bargain for the transfer of this piece of unfinished railway to the Hydro Electric people he will insert a clause that will make that a feeder to the Canadian National for whatever it is worth, and that is why I say you should know what that bargain is before you do anything. He might tie it up where they were originally going to make the connection and keep it out of town entirely. They originally intended this branch line to start at a point east of Ward 8 and make a connection with the main line of the Canadian Northern that may be comtemplated in this."

PAGE 11643. "Q. Doctor Reid, you are the Minister of Railways and Canals in the Dominion Government? A. I am.

PAGE 11648. "Q. What has been suggested, and may I say that perhaps the main reason for troubling you to give any evidence is this—it has been suggested that when the new line of the Hydro Radials is built through from St. Catharines to Bowmanville, the Hydro Radial line will be entitled to compete for traffic with the National Railway, which the Grand Trunk will then be, I assume, and that it can carry its stuff, or its freight, from the Niagara Central Railway through over its road right to Bowmanville, and there hand it over to the other, but that the National lines, whether Grand Trunk or former Canadian Northern, would not be required to be fed by it with that freight at all until it got to Bowmanville?"

"A. Well, I don't know that we went really into details, but my understanding would be this: that would be a railway from St. Catharines to Bowmanville: THEY WOULD HAVE THE RIGHT TO CARRY THEIR TRAFFIC ORIGINATING ON THEIR LINE THE FULL LENGTH OF THEIR LINE, OR TAKE AS MUCH HAUL OUT OF IT AS THEY COULD, AND THEN GIVE IT TO US, AND WE WOULD CARRY IT ON TO ITS DESTINATION; AND THE SAME WAY IF WE BROUGHT TRAFFIC FOR ST. CATHARINES SAY, WE WOULD TAKE IT ALL THE WAY TO ST. CATHARINES AND IF WE HAD TO USE THEIR LINE TO SHUNT IT INTO THEIR PLACE, OF COURSE, THE HYDRO ELECTRIC WOULD TAKE IT FROM US THERE.

"Q. You would carry all the freight on your line; running to Niagara Falls on the Grand Trunk, you would not hand it over to the Toronto-St. Catharines or to the Niagara Central Railway? A. For instance, if we had a carload of freight originating in St. John, New Brunswick, for St. Catharines or Niagara Falls, of course, we would take it over our line as far as we could, and then hand it over to the Hydro, if it were necessary to take it off our line at all. We would take every foot of haul we could carry on our own line. And the same, if any freight originated on the Toronto-Niagara-St. Catharines, they would carry it as far as they could on their line, and give it to us—or in other words, the way that I understood the agreement as intended or as we discussed it, we did not go into the details such as I am giving now—I must frankly admit that—BUT I UNDERSTOOD IT WOULD BE THE SAME AGREEMENT IN SO FAR AS INTERCHANGING WOULD BE CONCERNED, THAT IT WOULD DO THE SAME AS OTHER RAILWAYS DO. THEY CARRY IT AS FAR AS THEY CAN ON THEIR OWN, AND THEN GIVE IT TO THE RAILWAY THAT MUST TAKE IT OFF.

"Q. THAT WAS YOUR VIEW OF IT? A. THAT WAS MY VIEW OF IT. I CAN ONLY SAY THAT I VIEWED IT IN THAT WAY. WE DID NOT GO INTO THE DETAILS OTHER THAN THAT AS FAR AS MY MEMORY GOES.

"Q. Of course, at that time the Grand Trunk was not considered as a national railway? A. But the Canadian Northern was at Bowmanville just as well as the Canadian National. If it came to Bowmanville, the Toronto-Eastern connected with the Canadian Northern. Therefore, the Canadian Northern would take it, even though we had not got the Grand Trunk.

"Q. So far as the Niagara-St. Catharines is concerned, you did not touch that point with the National Railway then? A. No, we did not touch it. We touched it in this way, that we have a line of steamships running from Port Dalhousie and connecting at Toronto. We would take every way possible to get the freight; that is, after the Toronto-Niagara-St. Catharines had taken it as far as they could."

General Manager W. S. Rodger of the Detroit United Railways is positive that an interchange of traffic with steam lines would greatly develop freight traffic on all interurban divisions if the facilities to handle it are provided, and declares that entrance into Detroit for the interurban lines over their own right-of-way will increase traffic, as his evidence shows:—

PAGE 7557. "Q. If your conditions were such and were so arranged that you could interchange reasonably with steam roads where there were connecting points where traffic would be taken up, would that be an advantage to you, assuming that you had the ability to operate the equipment? A. If we had the facilities it would greatly increase our traffic handling on all divisions, the freight traffic."

"COMMISSIONER BANCROFT. Q. None of your lines have a right-of-way into Detroit, have they, outside of the surface lines? A. No, the right-of-way into the City of Detroit are all controlled by the city lines. Of course, all the interurbans are controlled either by a stock ownership or otherwise by the Detroit United Railway.

"Q. They come in on the streets? A. Yes, all surface.

"Q. Supposing you had the three principal ones coming right into the heart of Detroit on their own right-of-way, what effect would that have? A. A very material effect in increasing the suburban riding and enabling us to get in and out of the city much quicker. There is a howling demand all the time for rapid transit through the city streets to get the people out of the congested area into the suburban districts.

"COMMISSIONER MITCHELL. Q. Your Company also owns the city street railway? A. Yes.

"Q. How many miles in that? A. 306.

"COMMISSIONER MACALLUM. Q. Would it pay to operate the interurban cars on other streets? A. There are hardly any other streets they could be operated over because the streets are poorly constructed, fan-shaped, and it is very unfortunate in its layout for a large city.

"MR. McKAY: Some of our town planners tell us that is where we are unfortunate, that we have not got your fan-shaped diagonal streets? A. No, a high speed line either elevated or subway would be a great boon to the City of Detroit, particularly to the people in enabling them to get out into the suburban districts to live where they could get very much better conditions. Now, all of the interurban lines coming in are up against a 35 to 40 minute ride when they strike the city limits, and that is very discouraging to them.

PAGE 7559. "Q. And if you thought it would pay you better to bring your interurban lines in over a private right-of-way you would do so? A. We are convinced that it would be better for the interurban lines if we had a private right of way.

The Hydro officials collected a great deal of information about freight movements in the territory served by the radials, and had their field survey sheets distributed among a mass of data on radials.

This information was supplemented during the inquiry by freight data supplied by the steam railways, evidence given by motor-truck freight operators, manufacturers in the territory, and many other witnesses. The Arnold engineers went into the whole question in detail also. The information of freight movements on steam railways is useful, but not in such form as to be a basis for judgment of total expectations of freight in this territory. The Toronto-Hamilton and Buffalo Railway Company hauled in 1920, 2,379,242 tons of freight over the Hamilton-Welland division from which it derived a revenue of $1,610,459.69 on a division of 38 miles, according to Ex. 174, 2,328,505 tons of this was through freight.

Conditions entering into freight revenues are: the class of freight and its particular rate, whether less-than-carload or carload, the length of haul, whether the freight originates at points on the Hydro scheme and is destined to points off the system, or whether it originates at points off the system and is destined for points on the system, or whether the freight originates on the electric railways and goes to points on the railways, and many other things have to be taken into account in comparing steam railway figures of freight traffic. These considerations must be given weight, particularly when an interchange of traffic with the Canadian National Lines is involved.

Under the conditions proposed it is very reasonable to expect that the proposed radials will do a much better freight traffic than the United States interurban railways mentioned in this report. The best of the United States interurban railways are developing the freight traffic, and generally the interurban roads are paralleled by active steam railways and very good highways.

COSTS OF OPERATION. The heaviest item by far in cost of operation is conducting transportation, which includes wages and conditions to the employees who operate the cars.

The estimates of the Hydro engineers as given in evidence by Engineers Gaby and Fairlie, are based on wage rates of 50 cents an hour for labourers, and 55 cents an hour for platform time, and eight hours a day platform time.

The Arnold engineers in later estimates based the wage for labourers at 42½ cents and retained the platform time for motormen and conductors at 55 cents. It was explained, that taking 55 cents for all crew hours, would provide a maximum rate of between 55 and 60 cents, as the employees would start at a few cents less than 55. Mr. Arnold claimed that he used as a basis in his estimates wage scales, between those prevailing in the territory and the wages paid on the Detroit United Railways. The wages and conditions are explained in the evidence of engineers Gaby, Fairlie and Arnold.

PAGE 4115-T. U. FAIRLIE.

"MR. HELLMUTH: Q. If labour is more than 50 cents an hour when this railway is built, you have not calculated that much more, whatever that may be; if it is less you have not calculated that much less? A. That is right.

"Q. So that whatever element labour may play in it has been calculated at 50 cents an hour on the Hydro Radials? A. Basic rate, yes.

"COMMISSIONER BANCROFT: Q. That is common labour? A. Yes.

"Q. I suppose for all the other work you use the prevailing rates? A. Yes, in the different municipalities.

"Q. 1920 rates? A. Yes."

PAGE 964—F. A. GABY.

"Q. Assuming the rate of wages they run on now, 55 cents an hour, $2.20 a day. Can you get men to work for that? A. No, they get another four hours during the day.

"Q. They would get an eight-hour shift? A. They would get eight hours, but they take it in skips.

"Q. That has to be provided in your cost of operating? A. Yes, we have allowed for that, the time taken for the men coming and going. We have figured on a maximum of 60 per cent rush during the period of the two hours in the calculation of our cars. We figured handling those out in certain districts on ten-minute schedules, four or five car trains as the case may be and meshing in the maximum peak on a five-minute schedule.

"MR. ROBERTSON: Q. Have you worked out the time schedule? A. We had to do that to get the number of cars necessary to carry these passengers.

"Q. Would it be convenient to put that in at an early stage? I have been asked by a certain gentleman to see if you had something of that kind? A. We can give a time schedule as to what our operations are.

"Q. Will you put that in? A. Yes.

"Q. On this road particularly? A. Yes."

PAGE 8706—B. J. ARNOLD.

"COMMISSIONER BANCROFT: Q. I would like you to turn to table E. 26 where, under the heading 'Conducting Transportation' is shown 'passenger trainmen' '39,900 motormen hours at 55 cents' and '42,900 conductor hours at 55 cents' and then 'freight and express trainmen; motor express—5,700 crew hours at $1.65; freight crews—8,450 crew hours at $2.75.'" Those crew hours mean three to a crew? A. Three men at 55 cents, yes.

"Q. That is in the first case? A. Yes.

"Q. And five to a crew in the second case? A. Yes, I think it divides out that way.

"Q. It means five of a crew? A. Yes, that is what I said a while ago, that on freight cars we put the requisite number of men.

"Q. The next item is 'miscellaneous car service employees and expense', and you have reduced that to car mileage expense? A. Yes.

"Q. I suppose you could tell us the rate that is based on? A. 55 cents an hour.

"Q. Just the same? A. Just a moment. That does not mean that each car is going to carry a certain number of men.

"Q. No, I was wondering what was the basic rate? A. These are car service employees, not motormen and conductors. I do not know that I understand your question?

"Q. What are you going to pay per hour for a miscellaneous car employee? A. I have not that in my mind. I can find that out for you.

"Q. Yes, you can get that afterwards. Then, 'Station Employees; miscellaneous employees, freight handling at Hamilton, Galt, Guelph, 45,000 tons at 35 cents.' Is that for handling per ton or per hour? A. That is handling per ton. I wish I could answer your first question right away, but I can get it for you afterwards.

"Q. Then, 'Station supplies and expenses' and then 'Car house employees and expenses'. That is reduced to car miles? A. Yes.

"Q. I suppose we can get the basic rate for that—how much an hour? A. (No answer)."

PAGE 9377.

"On page 8706 Commissioner Bancroft asked certain questions with reference to wages of station employees and so forth, and I told him I would get him some information on that.

"The miscellaneous car house employees and expenses are based on a comparison with similar wages paid by other roads. Take the scale paid by the N. S. & T. at the present time, the car house employees would be paid as follows:—

Car cleaners—35 to 45 cents an hour.
Trailer men—42 to 53 cents per hour.
Trailer men helpers—35 to 45 cents per hour.
Pit men—48 to 50 cents per hour.

"THE ACTUAL COSTS ON THE D. U. & R. SYSTEM FOR 1919 AS REPORTED WERE USED AS A BASIS FOR OUR ESTIMATES AND THEY ARE SOMEWHAT HIGHER THAN THESE FIGURES HERE, SO WE FIGURE WE HAVE BEEN FAIR IN OUR ESTIMATES.

"In other words, here is a road operating right in the territory and we have taken a somewhat higher figure.

"COMMISSIONER BANCROFT: Q. Do you say you have taken the D. U. R. figures? A. We used the figures we obtained from the D. U. R. people as a sort of guide in making our figures, and they are somewhat higher than the wages I have just given.

"THE CHAIRMAN: That is the wage scale? A. Yes.

"MR. McKAY: Q. In 1919? A. Yes.

"COMMISSIONER BANCROFT: Q. You have not taken the D. U. R.? A. (No answer.)

Q. You have taken the N. S. & T. and the D. U. R. and have gone in between them? A. I cannot answer offhand but we took the D. U. R. as a guide and in 1919 they were 20 per cent. higher than those paid by the N. S. & T. and we got in between there somewhere.

"In other words, we have attempted not to scale anything down below what might reasonably be expected to happen.

"A large part of this station expense is for material, supplies and so forth, and the balance of it is wages.

"The car couplers and such men as that are estimated to be paid 45 to 50 cents an hour.

"Crossing men, not station expenses necessarily are estimated at about $900 a year.

"COMMISSIONER BANCROFT also asked at page 8707 for information regarding the wages, and I have some other figures that bear on it.

"The figures are as follows for station agents:

"Toronto and York Radial, from $70 to $110 a month.

N. S. & T. $110 to $140 per month.

Toronto Suburban $100 to $125 per month.

London & Port Stanley $125 to $200 a month."

"These are the wages the station agents are now receiving. We have used in our estimates from $100 to $200 per month.

"The substation operators on the Toronto & York Radial are getting $140 a month, and $150 per month on the N. S. & T. With regard to the Toronto Suburban I have no information.

"COMMISSIONER MACALLUM: Q. How many station agents are there on the London-Port Stanley? A. I do not know, I imagine there must be three day men; I do not know offhand; they have two large stations, does anyone know?

"MR. McKAY: Port Stanley, St. Thomas and London at least; and Clanford and one other—five? A. We have used for such station men $100 to $125 a month.

"COMMISSIONER BANCROFT: Q. Substation men? A. We have taken $100 to $125 a month. You are aware that a substation operator has a pretty easy job as a general proposition and consequently men who may be incapacitated for other work can operate a substation and receive that pay for it.

"Clerks, stenographers, cashiers and so forth on the Toronto & York are paid from $60 to $110; on the N. S. & T. from $60 to $110; on the Toronto Suburban from $60 to $100; on the London-Port Stanley from $65 to $125, and we have estimated from $83 to $125.

"Local station ticket sellers we have put in at $75 a month.

"For power men, the N. S. & T. pays from $80 to $90 a month and we have put them in at $100 a month.

"I HAVE SIMPLY READ THOSE FIGURES TO YOU TO SHOW WE HAVE NOT TAKEN THE MINIMUM BUT HAVE TAKEN A FAIR AVERAGE AND HAVE BEEN FAIR TO LABOUR."

Both Messrs. Gaby and Arnold claim to have allowed ample money in the estimates to pay wages at prevailing rates in the territory.

I cannot agree with that, and am of the opinion that adjustments will be necessary. These adjustments will not affect the scheme and I am convinced that fair rates of wages and conditions can be given the employees on the radial railways, without interfering with the financial success of the project.

The suggestion to adjust wages brings up a very important matter. In the indenture made between the Hydro Electric Power Commission and the various municipalities, there is a clause which is a grave danger to the employees on the radial railways.

Included here is an extract from the indenture covering the Toronto Eastern Railway.

TORONTO EASTERN RAILWAY.

EXHIBIT 44.

"This indenture made the day of in the year of our Lord, one thousand nine hundred and

BETWEEN

THE HYDRO ELECTRIC POWER COMMISSION OF ONTARIO (Hereinafter called the "Commission") of the First Part.

and

"The Municipal Corporations of the Township of York, the Township of Scarboro, the Township of Pickering, the Township of Whitby, the Township of East Whitby, the Township of Darlington, the Town of Whitby, the Town of Oshawa, the Town of Bowmanville, and the City of Toronto, (hereinafter called the "Corporations") of the Second Part."

"6. In case the Commission shall at any time or times be prevented from operating the railway or any part thereof by strike, lockout, riot, fire, invasion, explosion, Act of God, or the King's enemies, or any other cause reasonably beyond its control, then the Commission shall not be bound to operate the railway or such part thereof during such time; but the corporations shall not be relieved from any liability or payment under this agreement and as soon as the cause of such interruption is removed the Commission shall, without any delay, continue full operation of the railway, and each of the corporations shall be prompt and diligent in doing everything in its power to remove and overcome any such cause or causes of interruption."

Clause 6 provides, that in the case of a strike or lockout "the Commission shall not be bound to operate the railway", but the corporations or municipalities "shall not be relieved from any liability or payment under this agreement" and the section concludes "each of the corporations shall be prompt and diligent in doing everything in its power to remove and overcome any such cause."

In the case of a dispute over wages and conditions and a deadlock occurred between the Hydro Commission and its employees, the Commission not being bound to operate according to this indenture, the employees immediately come into conflict with the municipalities who are bound to "overcome any such cause or causes of interruption."

It is well known, that the Industrial Disputes Act which provides a means of conciliation and investigation into industrial disputes between employees and employers on public utilities, does not apply where a province is involved, unless by mutual consent of both parties.

There is no provision requiring thirty days' notice on either side of a change of conditions or provisions for conciliation or arbitration, other than what may be made in agreements between various organizations of employees and the Hydro Commission. Disputes occur over making agreements. In my opinion, it is necessary to have legislation passed ensuring the employees on the radial railways the opportunity of conciliation and investigation, in the event of disagreement so that everything may be done to provide uninterrupted service on these public utilities.

As long as Clause 6 stands, as in the agreement, including the words strike and lockout, without protecting legislation for the employees, they are not in a fair position to take care of their own interests.

CAR MILE COSTS: Mr. Carroll Bailey in Exhibit 175, being his report, in a table described as "Operating Statistics of Representative Interurban Railways in the United States" gives the average cost per car mile as 41.90 cents. These statistics are to December 31st, 1919, for fourteen railways in operation.

Mr. Arnold in his segregation of operating expenses arrives at 38 cents for the car mile cost for the interurban services in the proposal for Ontario. It is the suburban costs of operation and the greater freight operation that lowers the average car mile costs for the system. It should not be overlooked, that the car mile costs on other electric railways are largely interurban, with entrances into cities over city streets into main terminals and this makes a great difference. It has not been satisfactorily explained by any expert why car mile costs can be comparatively low where wages are at the peak compared with other railways.

One of the clearest explanations of the different conditions that enter into car mile costs was given by Assistant Manager Wilson of the Toronto and York Radials.

PAGE 11215—CHARLES L. WILSON.

"Q. Suppose that the Metropolitan Division had a right-of-way into the centre of the city, and there was no transfer at that point, where you have to transfer, what effect would that have on your operating cost if you had a rapid transit system, generally speaking? A. I think it would be a very desirable condition for the Metropolitan Railway.

"Q. For instance, in the Hydro estimates it is estimated that the average operating cost per mile is about 28.7. It varies under various conditions, but that is the average, that is in the Arnold estimate. Yours is 44.2. They have taken an average wage of 55 cents an hour. What makes the difference? A. Take the operation on our road on our private right-of-way from Newmarket north, our rate of speed is half again as fast as that on Yonge Street.

"Q. That reduces your operating cost? A. That reduces our operating expenses very materially. Take the question of a combined terminal with rolling stock, car barns, shops, station agents, and all these things that are interchangeable between different roads, the question of handling supplies and stores on a standard road connected and used as a unit will certainly very materially reduce the cost.

"Take our conditions on the Mimico Division. We have a railway four miles from our shop where we have to cart everything back and forth for maintenance and repairs. Our stores are kept at the St. Clair car barn, and that again has to be carted out to those divisions.

"Take the question of supplies and everything of that kind, and the capital expenditure in supplies, and the carrying charges, insurance and building; the Mimico line is 4 feet 10 7-8, the Metropolitan is a standard gauge 4 feet 8½, and the Scarboro gauge is 4 feet 10 7-8. There is the overhead charge for rolling stock and all those things which cannot be interchanged. Take the maintenance of cars. We have to maintain three distinct maintenance gangs at three places day and night, where two gangs would do it instead of six.

"Q. You are acqauinted with the various divisions which are before this Commission? A. I have not followed this matter very closely."

PAGE 11217.

"Q. Take for instance, those three roads; supposing they were all the same gauge? A. Yes.

"Q. And they had a right-of-way into the heart of Toronto? A. Yes.

"Q. Would that materially reduce the operating cost? A. Yes.

"Q. Have you no idea how much? A. At one time I did figure out we could save 15 cents or 18 cents per car mile.

"Q. By that process? A. Yes. I figured that somewhere in the neighborhood of 30%, if I remember right; that is some years ago.

"Q. That is, if you have the entrances into the city and your own right of way? A. If we had our own right of way where we could make rapid trips out to the Humber and to the east limit of the City of Toronto, we would have a very material saving.

"MR. MCKAY: Q. You mentioned to one of the Commissioners the matter of scheduled speed. Supposing you could approximately double your scheduled speed of your trips, what effect would that alone have on your operating costs per car mile? A. That would bring it down at least 30%, that one feature.

"Q. If you were able to do that? A. That is the transportation cost.

"Q. Then in the next matter, supposing you did not provide betterments of one kind and another as you have out of operating expenses, and confined the operating expense strictly to what was ordinarily considered direct operating cost, what effect would that have? A. That would show a lower operating rate per mile.

"Q. It would show a lower operating rate per mile? A. Yes.

"Q. Whatever extent you provided for betterments, to that extent your operating costs per mile are increased in the process? A. Yes.

"MR. MCKAY: I think that is all."

On the Chicago-North Shore and Milwaukee Railway the cost of Operation per car mile was 39.45 cents in 1920 and including taxes 41.29 cents and on June 1st, 1920, the wage rate for platform time was set at 82 cents per hour. In 1919 when the wage rate was 67 cents an hour it was 33.12 cents per car mile without taxes and including taxes 35.45 cents.

On the Detroit, Munro, Toledo Line in 1919, Manager Rodger states the car mile cost was 44.40 cents with wages for platform time at 55 to 65 cents per hour and in 1920 with wages set in June of that year at 65 to 75 cents per hour, he gives it as 55.74 cents. The scale on the Detroit United Railways is the same, it is understood, for the street railway system as the interurban railways.

The evidence of C. E. Thompson, assistant to the President of the Chicago and North Shore Railway and Manager W. S. Rodger of the Detroit United Railways, is included to illustrate the different factors which enter into cost of operation and how they vary according to operation. Table 5 is a segregation of costs by services by the Arnold engineers, including car mile costs for all divisions.

PAGE 7811—C. E. THOMPSON.

"The revenue per car mile from passengers was 50.48 cents; freight and express 80.9; miscellaneous revenue 55 cents; total 51.34 cents.

"Q. 51.34 cents per car mile? A. Yes, the operating expenses for Way and Structures; 4.07 cents; Equipment 3.80 cents; Power 6.19 cents; Conducting Transportation 16.65 cents; General and Miscellaneous 7.91 cents; total 39.45 cents. Taxes 1.84 cents per car mile.

"COMMISSIONER MACALLUM: That is, your expenses per car mile are 39.45 cents? A. Without taxes, and with taxes 41.29 cents."

PAGE 7812.

"The operating expenses for 1919 were: Way and Structures 4.83 cents; Equipment 3.76 cents; Power 5.01 cents; Transportation 13.19 cents; Traffic 0.80 cents; General Miscellaneous 5.98 cents; Total 33.12 cents, excluding taxes. The taxes are 2.33 cents, making a total of 35.45 cents.

"Q. That is, the operating expenses per car mile were 33.12 cents without taxes and 35.45 cents including taxes in 1919? A. Yes.

"Q. What were the causes of the increase, can you say? Can you give any reason for that increase in costs per car mile in 1920 over 1919? A. The increased cost per car mile was due to increase in the wage scale, to the increase mileage operated on the terminal and to a slight extent due to increase in cost of materials.

"Q. Was there any increase in power cost between 1919 and 1920 or did the power increase you spoke of take place; when did that take place? A. There was a considerable increase in the power cost of a little over 20%.

"Q. When did that take place? A. It was affected by the increase in the price of coal and the increase in the labour costs of the power companies.

"Q. When was that order made about which you told the Commission in regard to power? A. The order of the Commission was effective in September, 1918, in Wisconsin, and in August of 1920 in Illinois. The effect of the Wisconsin order was not nearly so pronounced until 1920, until we got into the peak of the labour cost and the very high coal cost.

"Q. That is the time you felt it most? A. Yes.

"Q. Speaking of your cost of power, have you worked out what it is on the basis of consumption? A. I can tell you the consumption per car mile. The average for 1920 was 4.46 kilowatt hours per car mile.

"Q. So that the cost of power per car mile will enable one to get at the cost if they desired to do so? A. Yes.

"Q. Can you tell us what reductions would be made in the cost per car mile if a return was made to the former basis of operating wages and to the former cost of power? A. I worked it out in this way; since June 1, 1920, our wage scale has been on the basis of 82 cents an hour for trainmen. Of course, on a road of our character the scale paid trainmen is reflected through all other classes of labour.

"Prior to that time for a few months our scale was on the basis of 67 cents; in other words, we had a flat increase of 15 cents per hour or about 23%, which was reflected in all classes of labour.

"I just missed that last statement? A. I said that effective June 1st last year our wages of trainmen were increased to the basis of 82 cents per hour from 67 cents per hour, an increase of 15 cents an hour or 23% or 24%, which increase was reflected through all other classes of labour on our line.

"Q. That is to say, all other classes of labour received approximately the same percentage of increase? A. Yes."

DETROIT MUNROE AND TOLEDO LINE

PAGE 7479—W. S. RODGER. "Q. You have not got before you the relative figures of passenger and freight car mileage the operating ratio in 1919? A. 54.19.

"Q. Could you tell me any of the matters which made a difference in expense of operation in 1920 as against 1919?

"A. Higher wages paid to the men and a decreased traffic due to the industrial depression.

"Q. What were your rates of wages commencing 1919 and without going through all the detail I suppose we may fairly take the wages paid to train crews as fairly illustrative, what were they in 1919? A. I believe the average in 1919 was 55 to 65 cents per hour for the trainmen and it was raised in June 1920 to 65 to 75 cents per hour. At the time that the trainmen received their increase, wages and salaries generally over the system were increased to the extent of about 20%.

"MR. HELLMUTH: Say in June, 1920? A. Yes, sir.

"MR. MCKAY: The figures we have been giving to the Commission are for the calendar year 1919 and 1920, they are not June to June figures? A. Yes, sir, except that the increase to the high rate of 75 cents did not take effect until June.

"THE CHAIRMAN: That would only apply to part of a year? A. Yes, sir.

"MR. MCKAY: Half the year 1920 increased wages were in force? A. Yes."

PAGE 7478

"Q. What were the operating expenses during the year 1920 first, and then 1919? A. That total operating expenses per car mile on the D. M. & T. for 1920 were 55.74 cents per mile.

"Q. That is both passenger and freight? A. Yes.

"Q. Just for the purpose of getting at a basis, can you tell me the total operating expenses in money?

"A. Total operating expenses 1920, $1,012,942.06.

"COMMISSIONER MITCHELL: Is that on the one line on the Detroit, Munro and Toledo? A. Yes.

"MR. MCKAY: And that yielded an operating expense per car mile of ——? A. 55.74 per car mile.

"Q. We have already the total revenues both of passenger and of freight, and we can get the operating ratio by that—Have you available before you the operating ratio for that year?

"A. Yes, sir.

"Q. What was that? A. 65.18 in 1920.

"Q. Could you give me the similar figures for 1919 what were the total earnings in that year?

"MR. HELLMUTH: Would you take the same order? He gave the operating expenses per car mile first.

"MR. MCKAY: Yes, operating expenses per car mile?

"A. 44.40.

"Q. Now the total operating expenses in that year?

"A. $796,977.92.

"Q. You have not got before you the relative figures of passenger and freight car mileage—the operating ratio in 1919? A. 54.19."

B. J. Arnold EXHIBIT 208 Table V.

"HYDRO-ELECTRIC RAILWAYS".

Segregation of Operating Expenses By Classes of Service—1925.

Toronto-St. Catharines Division:				
Operating Expenses	$ 690,800	$ 224,200	$ 565,000	$ 1,480,000
Car Miles	2,180,000	1,066,000	3,085,000	6,331,000
Expenses per car mi	31.6c	21.0c	18.3c	23.4c
Revenue per car mi	64.3c	31.7c	35.4c	45.4c
Operating Ratio	49%	66%	52%	52%
Toronto-Eastern Division:				
Operating Expenses	$ 201,100	$ 388,600	$ 107,300	$ 697,000
Car Miles	632,000	2,092,000	378,000	3,102,000
Expenses per car mile	31.8c	18.6c	28.4c	22.5c
Revenue per car mile	70.9c	31.2cD	49.0c	42.2c
Operating Ratio	45%	60%	58%	53%
Toronto Suburban Division:				
Operating Expenses	$ 240,600	$ 357,900	$ 55,500	$ 654,000
Car Miles	620,000	1,287,000	240,000	2,147,000
Expenses per car mile	38.8c	27.8c	23.1c	30.4c
Revenue per car mile	46.6c	32.7c	52.5c	39.7c
Operating Ratio	83%	85%	44%	77%
Hamilton-Elmira Divisions:				
Operating Expenses	$ 377,500	$ 87,600	$ 234,900	$ 700,000
Car Miles	784,000	430,000	682,000	1,896,000
Expenses per car mile	48.2c	20.4c	34.5c	36.9c
Revenue per car mile	75.3c	24.7c	51.2c	56.2c
Operating Ratio	64%	82%	67%	66%
N. S. & T. Divisions:				
Operating Expenses	$ 198,100	$ 219,600	$ 301,000	$ 1,019,000
Car Miles	1,055,000	630,000	743,000	2,428,000
Expenses per car mile	47.2c	34.9c	40.5c	41.9c
Revenue per car mile	58.8c	37.3c	68.0c	58.3c
Operating Ratio	80%	94%	60%	72%
All Divisions:				
Operating Expenses	$2,003,400	$1,277,900	$1,263,700	$ 4,555,000
Car Miles	5,271,000	5,505,000	5,128,000	15,904,000
Expenses per car mile	38.0c	23.2c	24.7c	28.7c
Revenue per car mile	63.7c	31.9c	44.0c	47.2c
Operating Ratio	60%	73%	56%	61%

Note: For details by major accounts see Table Page A-8"
This table is taken from Arnold's Exhibit 208 and includes subway Terminal in Toronto.

The car mile costs in the Hydro Estimates as compared with other railways have to be considered from the standpoint that it is intended to do a regular freight business, both carload and less than carload on electric railways, with entrances into main terminals, and other advantages enumerated which lower the average car mile costs. It is questionable whether any electric road has the advantages as contained in the proposal.

BASIS OF ESTIMATES. In the Hydro estimates, six per cent. is estimated as interest charge on capital investment, except in the case of the purchase of the Niagara Central Lines, which includes the assumption of 5 per cent. bonds amounting to $1,098,000, due 1929, and 50 year 4½ per cent. bonds amounting to $2,446,374.90; and in the case of the Toronto Suburban the assumption of bonds at 4½ per cent. due 1961 amounting to $2,628,000.

A sinking fund is started ten years after commencement of operation of one per cent. each year, except in the case of the Toronto Suburban when the sinking fund commences in 1930, and for the Niagara Central Lines the sinking fund commences in 1931.

In the Arnold estimates the sinking fund of one per cent. commences on all divisions in 1935.

Depreciations and maintenance are provided for, and taxes at various rates.

The passenger rates are generally standard, 2.875 per mile; interurban average 2¼ to 2½c. per mile, and suburban averages 1½ cents per mile.

Freight rates are based on those in effect May 30th, 1920, although the rates have been increased by 40 per cent. in August, 1920.

Power rates are included for each point on the various divisions.

GENERAL EVIDENCE. A mass of evidence and many reports have been submitted to your Commissioners. The evidence consists of twenty-seven volumes and 13,376 pages. Your Commissioners heard evidence during 112 days. They visited many of the interurban railways in operation in the United States and mentioned in the evidence, toured the territory involved in the Radial Scheme proposed by the Hydro Commission and examined the plans during the inspection of the locations.

I have endeavoured in this report to deal strictly with the broad question asked by the Government as to whether the Province of Ontario should endorse the principle of publicly owned and operated radial railways, and if so, how to proceed.

The Hydro engineers and Arnold engineers made the most thorough study of the scheme from every angle compared with any other experts. The great amount of information given by these engineers reflects a tremendous amount of work. Your Commissioners insistence for details and summaries of various features helped to make the work heavy. The Hydro engineers are engaged in the construction and operation of public utilities owned by the people. Their sole interest in the matter is the benefit of the municipalities for which they are trustees, and the welfare of the province.

Two witnesses who gave much evidence, severe in criticism of the estimates and the scheme were Mr. W. F. Tye and Dr. L. A. Herdt. These two engineers joined in a "Report on the proposed Hydro-Electric Radial Railway from Port Credit to St. Catharines, Ontario" in 1917. Their conclusion then was "Your Board has reached the unanimous conclusion that it is not in the best interest of Hamilton to enter the proposed agreement." This was a recommendation to a citizens' committee of Hamilton regarding the proposal of the Hydro Commission to build the Port Credit to St. Catharines line. At a more recent date the citizens of Hamilton voted in favour of joining in the radial project.

Mr. R. F. Rifenberick, Consulting Engineer, of Detroit, applied the accounting system of the Interstate Commerce Commission of the United States for electric railways to the Hydro proposal. It is not in my opinion a reasonable test to apply to a new railway. It is doubtful whether any steam railway or electric railway in Canada or the United States would survive the test as it was applied in this case.

Mr. R. I. Todd of Indianapolis gave evidence of a gloomy nature about the finances of interurban roads around Indianapolis, yet in a speech delivered before the Central Electric Railway Association held at Toledo, February 24th, 1921, several months before he gave evidence, he said:

"If our electric railways have thus shown such staying powers in the midst of what seemed insurmountable obstacles, is it not positive proof that with adequate fares and just regulation they will be able to render such service in the carrying of passengers and freight as will contribute perhaps more than any other one factor to the great upbuilding of our American cities and towns and play a most important part during the present and coming period of reconstruction?

"This fact is recognized by some of the greatest financiers of the country, who have freely expressed the opinion that with proper rates of fare, electric railway securities will be among the most stable and solid investments anywhere to be found and compare favourably with municipal bonds and other first class securities. If this is true, as it undoubtedly it, a great civic and moral responsibility rests upon rate-making bodies everywhere to see that such fares are allowed in the interest and welfare of the great body of the public and the growth and upbuilding of the cities and towns."

General Manager Rodger, of the Detroit United Railways, states that 8 per cent. was paid in 1920 on $15,000,000 of common stock. The Detroit United Railways includes many interurban railways. His evidence on this point is:

PAGE 7609.

"COMMISSIONER BANCROFT: Q. Do you know what your total payroll was in the year 1920? A. No, sir; I have not figured it.

"Q. You paid 8% did you not, on $15,000,000?

"A. Yes.

"Q. $1,200,000? A. Yes.

"Q. That is on the Common Stock? A. Yes.

"Q. And you paid all your interest charges, your interest on your bonds? A. Yes.

"Q. You were speaking about a reduction in the cost of operation? A. Yes."

The difficulty of accurately representing the interurban earnings of the United States railways is illustrated by Mr. Carroll Bailey in his evidence, and it emphasizes the difficulties of accurate comparisons.

PAGE 6148.

"Q. In speaking of table one and of taking the whole mileage. I want to just clear up this; is it your understanding that the whole earnings over that mileage—that is, the total receipts of the road over the complete mileage—are included in table one?

"A. That is my understanding, sir.

"Q. And the only adjustment to be made is in the matter of operating cost where certain rentals might have to be regarded for the purposes of comparison?

"A. Yes, sir, if they are receipts on a track that is rented, they appear in the gross; if they are rentals to be paid for the use of the track, they appear in the operating.

"COMMISSIONER BANCROFT. Q. Is it your understanding that the earnings of an interurban road from the centre of Toledo to the centre of Cleveland are included in table one?

"A. Yes, sir, that is my understanding.

"MR. ROBERTSON: Q. So that for the purpose of getting earnings per track mile of route, the total is quite right?

"A. That is the reason we took the total mileage included."

PAGE 6150.

"COMMISSIONER BANCROFT: Q. Would you mind letting me return to that for a moment. I want to clear this up in my own mind. Here is the record, page 2724. Mr. Hellmuth is speaking,

"'When we are dealing with the earnings of the Lake Shore as a distinct corporate entity everything will be omitted that is earned beyond Toledo?

"A Yes.

"Q. And may I say in the same way everything will be put out that runs from Sandusky direct to Freemont on that line?

"A. Yes; except you will find in our report a complete detail of the Sandusky, Freemont and Southern Railway just the same.

"Q. But it is not part of the Lake Shore?

"A. No sir, neither earnings nor expense nor anything of that kind is included.'

"Then I asked a question.

"'How about the earnings in the city of Cleveland?

"A. They are not included.

"Q. Then your gross revenues are from the outside of the city of Cleveland—and when you get to Sandusky and then from Sandusky to Freemont is taken out?

"A. Taken out.

"Q. And then you go to the outside of Toledo; that represents the gross earnings? A. Yes.'

"That is the evidence of Mr. W. F. Coen.

"Q. That is from the outside of Toledo to the outside of Cleveland.

"A. His testimony sounds conclusive as far as his roads are concerned. I do not think that is the usual practice in setting up the financial statements.

PAGE 6151. "Q. If that was so it would change your figures, wouldn't it?

"A. As far as those roads are concerned.

"COMMISSIONER MITCHELL. Q. I think that applies particularly to Cleveland because they, when they get to the boundary of the city, hand their car to the city line and the city line takes the receipts of passengers?

"A. Change motormen and conductors. If they did that, then it would work out in that way.

"Q. It is wholly a city line.

"MR. ROBERTSON: Q. And they pay another fare there?

"COMMISSIONER BANCROFT: I am not concerned about the operation; I am concerned about where the earnings inside the city go.

"WITNESS: If that is true in regard to the Cleveland line, as conclusively it seems to be, the mileage should omit the Cleveland mileage."

RECOMMENDATION 2.

THAT THE GOVERNMENT INSTRUCT THE HYDRO-ELECTRIC POWER COMMISSION TO PROCEED AT ONCE WITH NEGOTIATIONS TO COMPLETE CONTRACTS OR AGREEMENTS FOR THE FOLLOWING: THE PURCHASE OF CERTAIN ELECTRIC RAILWAYS NOW OWNED BY THE FEDERAL GOVERNMENT AND THE TRAFFIC ARRANGEMENTS WHICH MAY ENTER INTO THE AGREEMENTS; THE PURCHASE OF A SECTION OF THE GRAND TRUNK STEAM RAILWAY OWNED BY THE FEDERAL GOVERNMENT; TO ACQUIRE RUNNING RIGHTS OVER CERTAIN SECTIONS OF THE GRAND TRUNK RAILWAY; ENTRANCE INTO AND THROUGH HAMILTON ON THE RIGHT-OF-WAY OF THE GRAND TRUNK RAILWAY AND OTHER ARRANGEMENTS AND AGREEMENTS WHICH I PROPOSE TO OUTLINE IN THIS REPORT.

According to the evidence there are a number of contracts, agreements, or arrangements to be made between the Hydro Electric Power Commission and other parties to complete the scheme as proposed. Among these agreements is the purchase of the three railway divisions from the Federal Government or the Canadian National Railways and the obtaining of trackage rights through Hamilton on the right-of-way of the Grand Trunk Railway. These agreements, etc., are summed up as follows from the evidence:

CONTRACT, AGREEMENT, OR ARRANGEMENT:

(1) To acquire the Toronto Eastern Railway from the Canadian National Railways.

(2) To take passengers from the Bay Street Terminal at Toronto uptown. This means making an arrangement with the Transportation Commission of the City of Toronto for the operation of a street car line to meet the passengers at the Bay Street Terminal or the building of a loop to bring passengers uptown, or some other arrangement to take the passengers from the Bay Street Terminal uptown.

(3) To acquire the Oakville to Hamilton Radial Railway line, now owned by the Dominion Power and Transmission Company.

(4) To secure trackage rights through Hamilton from the Grand Trunk Railway.

(5) To acquire the Niagara-St. Catharines and Toronto Railway, sometimes referred to as the Niagara Central Lines from the Canadian National Railways.

(6) To acquire the Galt and Elmira Branch of the Grand Trunk Railway from the Canadian National Railways.

(7) To acquire trackage rights from Guelph to Galt on the Grand Trunk Railway.

(8) To acquire the Toronto Suburban Railway from the Canadian National Railways.

(9) To acquire the right-of-way of the Old Belt Line from Lambton to the Lake Shore Road, over which right-of-way it is proposed to connect the Toronto Suburban Railway with the Toronto-St. Catharines Division between Sunnyside and the Humber River.

(10) To acquire operating rights over the Oshawa Electric Railway from the Canadian National Railways.

(11) To arrange for a connection at the Frontier.

Mr. Gutelius states regarding these agreements, etc.

"110. It is practically impossible at the present time TO ADVISE WHETHER THE RADIAL SCHEME AS PRESENTED WILL BE SELF-SUPPORTING FOR THE REASON THAT THE BASIC CONTRACTS HAVE NOT YET BEEN COMPLETED AND UNTIL THE TERMS OF THESE CONTRACTS ARE KNOWN IT WOULD BE IMPOSSIBLE TO REACH A DEFINITE CONCLUSION. The contracts and agreements referred to are as follows:

"Contract to acquire the Toronto and Eastern from the Canadian National Railway.

"Contract to acquire the Toronto Suburban from the Canadian National Railway.

"Contract to acquire the Toronto-St. Catharines from the Canadian National Railway.

"Contract to acquire the Galt and Elmira from the Grand Trunk.

"Contract to secure trackage rights through Hamilton from the Grand Trunk.

"Contract for trackage rights, Guelph to Galt on the Grand Trunk.

"Contract to acquire the line from Oakville to Hamilton.

"Contract to acquire the line from Hamilton to Beamsville.

"Contract to acquire the York Radial, Toronto to Port Credit.

"Contract with the Toronto Terminal Company for joint terminal facilities in the City of Toronto.

"111. The terms of any and all the above contracts might be so onerous as to defeat the ambition of the promoters."

Mr. Gutelius, in enumerating the contracts in this document refers to a contract to acquire the line from Hamilton to Beamsville, which has not been proposed by the Hydro Engineers; and a contract to acquire the York Radial—Toronto to Port Credit line—which is not included in the scheme but is to be acquired in the "clean-up" now under consideration; and refers to a contract with the Toronto Terminal Company for joint terminal facilities in the City of Toronto which is not included in the proposal, but has been mentioned during the investigation. As the estimates of the Hydro Engineers and the Arnold Engineers have been based on the assumption that many of the arrangements summarized in this report can be made, or alternate plans carried out, it is very important that negotiations be proceeded with immediately to complete the scheme.

With regard to entrance into Hamilton and through Hamilton over the Grand Trunk Railway right-of-way, the evidence given by Chief Engineer Gaby, and a letter, Exhibit 237, from President Howard G. Kelly of the Grand Trunk Railway System on the same subject, included in this report, illustrates the necessity for proceeding with negotiations to complete all the arrangements involved in the scheme.

PAGE 208-9. F. A. GABY.

"Q. So that through Hamilton you are not buying any right-of-way? A. Not for the purpose of this estimate.

"Q. That is, you are arranging or proposing to arrange with the Grand Trunk? A. Yes.

"Q. Have those arrangements been made? A. The final arrangement has not been made; the matter has been taken up with the President of the Company and discussed and details gone into with the Engineers and operating man.

"Q. How far does that take you through Hamilton? A. To the east of Hamilton in the neighbourhood of—to the west or north of Red Hill."

PAGE 303-4.

"Q. Then at what time did this change occur? Could you state the year or month or about the month? A. It has been more or less a gradual thing right from the time the by-laws were submitted because at that time representatives of the municipalities objected very strenuously to having further entrances into Hamilton; they wanted to combine all the entrances as a matter of fact on the present Grand Trunk location, and during the by-law this matter was actively discussed not only by the Railway Committee and Council, but by the people and by the Commission, and in placing the matter before the people we discussed the situation and promised our best efforts and endeavour to have the location changed from the Canadian National Railway, if possible, and combine it with that of the Grand Trunk Railway. I could not name any specific date because it has been a more or less continuous process; the matter has been taken up with the President of the Grand Trunk, and more especially since the taking over by the Government of the Grand Trunk.

"Q. Wasn't it stated publicly that the Hydro Electric Commission itself preferred the route over the Grand Trunk tracks or as close as possible to them if they could get permission from the Grand Trunk? A. That is right.

"Q. You didn't get permission from the Grand Trunk? A. WE HAVE NEVER GOT PERMISSION, BUT WE HAVE. SINCE THE CONTEMPLATED TAKING OVER BY THE DOMINION GOVERNMENT, HAD VERY ACTIVE CO-OPERATION BETWEEN THE ENGINEERING DEPARTMENT AND OPERATING DEPARTMENT.

"Q. The route which you suggested to us was really made possible when the Dominion Government took over the Grand Trunk? A. Yes.

"Q. That is why you changed it? A. That is why we changed it, and of course in compliance with the request and desire of the municipalities."

PAGE 321.

"Q. It is not agreed upon, in plain English? It is not agreed upon at all? A. We have had negotiations with the Engineers and they are satisfied as to the feasibility of the route and it is simply a matter of completion.

"Q. Have you had any communication with the Minister in regard to it? A. No.

"Q. Or from the General Manager of the road?

"A. We have had communications from the Minister with regard to it.

"Q. Have you had anything from the General Manager of the road?

"A. The matter has been discussed with the Commission and the General Manager of the road.

"Q. Isn't it the fact that his attitude certainly cannot be described as favourable?

"A. Any information I have gained he is very favourable towards it.

"BY THE CHAIRMAN: Q. Who is that?

"A. Mr. Kelly, the President of the Grand Trunk Railway."

EXHIBIT 237. "GRAND TRUNK RAILWAY SYSTEM.

"Howard G. Kelly,
President.

At New York, Montreal, Que.
Nov. 3rd, 1920.

"I. F. Hellmuth, Esq., K. C.,
Counsel, Radial Railway Commission,
C-O Messrs. Hellmuth, Cattanach & Meredith,
C. P. R. Building,
Toronto, Ont.

"Dear Sir:

Replying to your letter of the 29th ultimo: I beg to say that I have had no negotiations with representatives of the Hydro Electric Railway Commission looking to the use of the right-of-way of the Grand Trunk Railway through Hamilton for the purposes of an electric radial railway. Some months ago I had a conversation with Sir Adam Beck upon the subject, but the discussion was in the most general terms, and I did not consider it in the light of a negotiation. Any examination of plans which may have been made by engineers of the Grand Trunk Railway would have been merely in the nature of information, and so far, no plans or reports have been submitted to me.

Yours faithfully,
(Sgd.) Howard G. Kelley,
President."

RECOMMENDATION 3. UPON THE COMPLETION OF SUCH AGREEMENTS OR CONTRACTS, OR THE CHOICE OF ALTERNATE PLANS WHERE A SATISFACTORY AGREEMENT OR CONTRACT IS NOT ARRIVED AT, THE HYDRO-ELECTRIC POWER COMMISSION SHALL AT ONCE PLACE BEFORE THE GOVERNMENT THE RESULT AS COMPLETED, SHOWING CLEARLY WHERE THEIR EXPECTATIONS WERE REALIZED AND WHERE ALTERNATE PLANS HAD TO BE CHOSEN.

When the agreements or arrangements are completed or alternate plans chosen, the Hydro Electric Power Commission will be able to present to the Government a final total amount for the cost of construction. Declining prices of materials, will further reduce the capital cost and the total should be less than the later Arnold estimate of $40,753,000 for 1925, but not including a subway terminal in Toronto. The Hydro engineers will take advantage of such suggestions made by the Arnold engineers which improve the scheme, and the result of their studies. With all the arrangements completed and every care taken in the final details of construction, the scheme as proposed by the Hydro Engineers and the Arnold Engineers, without the Toronto subway terminal will be on a safe foundation.

RECOMMENDATION 4. FOLLOWING THE ACTION INDICATED ABOVE, THE GOVERNMENT SHALL REQUEST THE HYDRO-ELECTRIC POWER COMMISSION TO RECOMMEND TO THE GOVERNMENT, THE MOST ADVANTAGEOUS AND ECONOMICAL TIME TO COMMENCE CONSTRUCTION OF RADIAL RAILWAYS AND ON WHICH DIVISION OR DIVISIONS CONSTRUCTION SHOULD BEGN FIRST. THE AMOUNT OF MONEY ALREADY EXPENDED ON THE TORONTO AND ST. CATHARINES DIVISION WITH THE DESIRE OF THE MUNICIPALITIES SO CLEARLY EXPRESSED, WOULD SUGGEST THAT THIS DIVISION OUGHT TO BE COMMENCED FIRST AND HURRIED TO COMPLETION, SO THAT THE REVENUES MAY BE EARNED AS SPEEDILY AS POSSIBLE. THIS DIVISION IS ADMITTEDLY THE BEST AND MOST FAVOURABLE IN THE WHOLE PROJECT.

It is clear from the evidence, that the Hydro Electric Power Commission had no intention of proceeding with any substantial amount of construction during the high cost period of 1920. In Exhibit 54, being a letter from Sir Adam Beck, dated June 11, 1920, to Honourable E. C. Drury, Prime Minister of Ontario, extracts from which appear in the Government statement of July 6th, 1920, Sir Adam states:—

"The contemplated work for the year 1921 provided conditions remain as at present, will require an expenditure of approximately $2,500,000.

"It is the intention of the Commission to proceed with the work of constructing electric railways ONLY TO SUCH EXTENT AND AS RAPIDLY AS CONDITIONS AS TO REVENUE AND THE COST OF MATERIALS AND LABOUR WILL WARRANT."

Chief Engineer Gaby during his examination, page 933 of the record, gave evidence as follows:

"Q. Have you taken anything of that kind into consideration as likely to affect your service? A. Yes, estimates have been prepared on a basis of a certain rate and a certain cost as of today.

"Q. And yet you do not propose to build any road when costs are as of today? A. No."

Bion J. Arnold, in his report, Exhibit 206, and on "Report Page 29." states, "As the policy of the Hydro Electric Commission is understood it had no intention of proceeding with any large construction programme at the high level of prices existing in the early part of 1920. It was proposed to take only such steps of the general programme as the occasion might demand leaving the general construction to be carried out when THE PRICE LEVEL HAD FALLEN TO SUCH A POINT AS WOULD WARRANT SUCH ACTION."

During the evidence attempts were made to get from experts a date at which construction should be commenced. The answers were mostly indefinite. The Hydro Electric Power Commission should be requested by the Government to recommend proceeding with construction when price levels have reached a stage to warrant it.

There has been expended to February 15, 1921, according to Exhibit 158, which is a certified statement from Treasurer J. U. Gilmour of the Hydro Electric Power Commission, $1,183,437.83 on the Toronto-Port Credit-St. Catharines Division. This is for right-of-way, construction material, surveys and investigations. The total amount expended according to this exhibit up to February 15, 1921, on electric railway construction connected with the divisions in this proposal, is $1,310,548.64.

Your Commissioners requested Honourable Mr. Raney to provide them with information regarding the investment in radial railways by the province and other information, which was supplied through the Attorney General in a statement by Mr. G. T. Clarkson, which is included in this report.

Mr. Clarkson shows the sums invested by the Hydro Electric Commission of Ontario in Hydro Radial Railways and these totalled amount to $3,453,103.76. This is to October 31, 1920.

The situation at present is that up to October 31, 1920, the investment of the Hydro Electric Power Commission in electric railways totalled $3,453,103 76, and in addition to this, bonds to the amount of $10,160,363 for the Port Credit to St. Catharines Line "stood on October 31, 1920, guaranteed by the Province but unsigned by the Secretary of the Commission and unsealed by the Commission—and October 31, 1920, they were in the possession of the Commission.

"Since October 31, 1920, and on or about the 28th December, 1920, a further loan of $400,000 was obtained by the Commission from the Bank of Montreal, on the security of $1,200,000 of bonds mentioned which thereafter stood pledged for a total amount of $500,000."

It is also understood that, during the investigation, the Government decided to guarantee the bonds for the purchase by the Hydro Electric Power Commission of the three divisions of the Toronto and York Radials, the Sunnyside to Port Credit Division, the Metropolitan (North Toronto to Lake Simcoe) and the Scarboro Division.

Construction on the Toronto-St. Catharines Division from Toronto to Niagara Falls should be commenced as early as possible. A great sum of money has already been expended on this line.

With the acquisition of the Niagara Central Lines, which are in operation and their connection with the Toronto-St. Catharines Division; the acquisition of the Toronto Suburban, in operation at present, and its connection with the Toronto-St. Catharines Line between the Humber River and Sunnyside, both freight and passenger revenues will be increased greatly on the Toronto-St. Catharines Division. The early construction of this line with two divisions connected, will put three divisions in operation, and should do a great deal to convince the opponents of the project of the great benefits derived from radial railways.

Much evidence has been given about the separation of the Toronto-Port Credit section from the Toronto-London Line and its inclusion in the Toronto to St. Catharines Line. Mr. Clarkson's statement makes clear the expenditures on radials for each division and the method by which the Toronto-Port Credit section is included in the Toronto-St. Catharines Line. I am including his review of the situation on Hydro Radial Railways up to October 31, 1920. Mr. Clarkson's statement is followed by the statement of Treasurer Gilmour of the Hydro Electric Power Commission, Exhibit 156, showing the expenditures on radial railways to February 15, 1921.

"*Re Hydro Radial Railways.* In reply to your enquiry as to the amounts invested by the Hydro Electric Commission of Ontario in Hydro Radial Railways and the proportion thereof which have either been advanced in money or guaranteed by the Province, I would state to October 31st, 1920, to the end of the last fiscal year of the Commission the following amounts stood capitalized upon the books of the Commission in respect of the investment in Hydro Radial Railways.

"(1) In the Sandwich, Windsor and Amherstburg Railway	$2,255,500 95
"(2) In the Port Credit to St. Catharines Radial Railway	413,620 85
"(3) In the Toronto to Port Credit Railway	683,286 74
"(4) In the Toronto and Eastern Railway	743,946 40
"(5) In the St. Catharines & Niagara Falls Railway	25,984 29
"(6) In the Hamilton, Galt, Elmira & Guelph Railway	36,482 06
"(7) In the Hamilton, Brantford, Woodstock and London Railway	17,674 34

"While in addition the Commission had also expended in respect of valuation:—

"(8) Niagara, and St. Catharines and Toronto Railway	1,005 27
"(9) Toronto and Suburban Railway	5,604 86

"Dealing with them in order:—

"*Re Sandwich, Windsor & Amherstburg Railway.* The investment of the Commission in the above undertaking amounted on October 31st, 1920, to $2,255,500.96, of which $2,039,000 was represented by forty year 4½% bonds of the Commission to April 1, 1920, guaranteed by the Province of Ontario, while the balance was made up of advances to the extent of $216,500.96 made by the Commission to the undertaking. Of these advances, $200,000 were borrowed by the Commission from the Bank of Montreal against the security of $61,000 forty

year 4½% bonds of the Commission guaranteed by the Province and due on April 1, 1960. and $190,000 of bonds of the City of Windsor given in purchase of electrical works owned by the Railway Company and sold to the City by the Commission after the date of purchase.

"From the above it will be seen that the total of the bonds outstanding and guaranteed by the Province is $2,100,000—$2,039,000 of which represented the purchase price of the undertaking and $61,000 held and later pledged for purposes of rehabilitation.

"As against the guarantee of the Province given in respect of $2,100,000 of bonds above mentioned, eight municipalities have lodged their debentures with the Commission to the amount of $2,100,000 as security for payment of any operating deficits on the capital cost of the undertaking. No cash advances have been made by the Province to the undertaking.

"Since October 31st, 1920, the Commission on behalf of the undertaking has made application to the Government of the Province for the guarantee of upwards of $900,000 more of bonds for purposes of rehabilitation, extension and acquisition of equipment.

"*Re Port Credit to St. Catharines Railway.* The total amount invested by the Commission in the Port Credit to St. Catharines Railway to October 31st, 1920, was $413,620.85, of which $406,509.66 was expended in the fiscal year ending October 31st, 1920. In respect of this Radial Railway, the Province of Ontario has guaranteed bonds of the Commission under the Hydro Radial Railways Act to the amount of $11,360,363, of which said bonds $1,200,000 stood deposited on October 31st, 1920, with the Bank of Montreal as security for the payment of advances then outstanding of $100,000. The remainder of the bonds $10,160,363 stood on October 31st, 1920, guaranteed by the Province but unsigned by the Secretary of the Commission and unsealed by the Commission—on October 31st, 1920, they were in the possession of the Commission.

"Since October 31st, 1920, and on or about the 28th of December, 1920, a further loan of $400,000 was obtained by the Commission from the Bank of Montreal on the security of $1,200,000 of bonds mentioned which thereafter stood pledged for a total amount of $500,000.

"With the investment of the Commission in the undertaking amounting to $413,620.85 on October 31st, 1920, and $100,000 only obtained at that time by borrowing (against $1,200,000 of bonds mentioned) the remaining $313,620.85 was expended out of moneys belonging to the power undertaking. The use of power funds for such purposes being unauthorized, the further loan of $400,000 was obtained on December 28, 1920, to refund the same.

"At the present time the obligation of the Province in respect of Toronto, St. Catharines Railway consist of the guarantee on its part of $11,360,363 of Hydro Radial bonds, of which $10,160,363 are held by the Commission not fully executed and the remaining $1,200,000 are pledged to the Bank of Montreal for advances of $500,000. No cash advances have been made by the Province for the purposes of the Railway."

"*Re Toronto to Port Credit Radial Railway.* To October 31st, 1920, the expenditures of the Commission in connection with the Toronto to Port Credit Radial Railway amounted to $683,286.74, which expenditures were made upon the authority of a letter of Sir William Hearst, late Premier of the Province of Ontario, that if the Commission would obtain resolutions by the municipalities interested requesting the Government to introduce and pass all amendments to existing legislation that might be necessary to validate the building of an electric railway between Toronto and Port Credit, as part of the proposed Toronto to St. Catharines Hydro Electric Railway, so as to make the same legal, valid and binding upon the municipalities, that the Government would with the presentation to it of such resolutions support legislation to that effect. On the basis of these assurances and with resolutions of the municipalities in its possession, the Commission acquired certain rights of way and made other expenditures in connection with the railway out of funds held by it under the terms of the Power Commission Act. The expenditures so made to October 31st, 1920, amounted as before stated to $683,286.74. On October 31st, 1920, bonds of six municipalities to the amount of $5,109,573 stood deposited with the Commission under the terms of the Hydro Radial Act but no bonds had been issued by the Commission neither had the Province entered into any guarantees in respect of the line. The $683,286.74 expended by the Commission upon the line can, however, fairly be said to be part of the funds advanced by the Province to the Commission under appropriations

made for the purposes of the different power systems and undertakings operated and controlled by the Commission.

"Re Toronto and Eastern Railway	$43,946 40
St. Catharines & Niagara Falls Railway	25,984 29
Hamilton, Galt, Elmira & Guelph Railway	36,482 06
Hamilton, Brantford, Woodstock & London Railway	17,617 34
Total	$124,087 09

"The above amounts expended by the Commission in respect of such Railways, were made out of funds held by it for the benefit of power undertakings and without any apparent legal authority. No bonds have been issued by the Commission in respect of such railways or guarantees given by the Province.

"On the Toronto and Eastern line the municipalities interested have passed by-laws and certain. but not all of the agreements with the Commission have been executed.

"On the St. Catharines and Niagara Falls line by-laws have not been submitted to or voted upon by the interested municipalities.

"On the Hamilton-Galt-Elmira and Guelph line by-laws were carried by certain but not all of the municipalities interested and no agreements have been executed between any of the municipalities and the Commission.

"On the Hamilton-Brantford-Woodstock and London line by-laws have not been submitted to or voted upon by the municipalities interested.

"Moneys expended by the Commission in respect of valuations have been as follows:—

"Niagara-St. Catharines & Toronto Railway	$1,005 27
Toronto Suburban Railway	5,604 86
Total	$6,610 13

"These expenditures were made out of the general funds of the Commission and there would not appear to be any statutory authority permitting disbursement of the same. No bonds have been issued by the Commission in the connection, neither is the Province under any liability in respect of the undertakings.

"In addition to the amounts mentioned sums expended by the Commission in respect of the Hydro Radial Investigation amounted to October 31st, 1920, to $44,704.09, which sums the Commission contends are repayable by the Province to it.

Yours truly,

(Sgd.) G. T. Clarkson."

"EXHIBIT 158

ELECTRIC RAILWAY CONSTRUCTION.

	To July 6, '20	July 7,'20 to Feb. 15,'21	Total to Feb. 15, 21
Road & Equipment.			
Toronto-Port Credit—Right of Way	588.680 02	40.888 60	629,568 62
Surveys and Investigations	16,493 67	52,778 85	69,272 52
	605.173 69	93,667 45	698,841 14
Port Credit-St. Catharines—Right of way	34,284 00	29,443 96	63,727 96
Construction Material	946 21	335.204 36	336.150 57
Surveys and Investigations	44,908 09	39,770 07	84,678 16
	80.138 30	404,418 39	484.556 69
Surveys & Investigations.			
Toronto Eastern Line	25.001 50	25.074 37	50,075 87
St. Catharines-Niagara Falls Line	17,418 86	9,287 82	26,706 68
Hamilton-Galt-Elmira-Guelph Line	25.324 57	13,133 76	38.458 33
Engineers' Tools and Equipment	4,313 74	11 55	4,325 29
	72,058 67	47.507 50	119,566 17
Valuations.			
Niagara-St. Catharines & Toronto Railway	518 11	1,166 64	1,684 75
Toronto Suburban Railway	2,468 42	3,431 47	5,899 89
	2,986 53	4.598 11	7,584 64
TOTAL	760.357 19	550,191 45	1,310.548 64
Summary.			
Expenditures on purchase of Right-of-Way	622,964 02	70,332 56	693,296 58
Construction Material	946 21	335 204 36	336,150 57
Surveys, Investigations & Valuations	136,446 96	144.654 53	281,101 49
TOTAL	760,357 19	550.191 45	1,310,548 64

Certified.

HYDRO ELECTRIC POWER COMMISSION OF ONTARIO.

(Sgd.) "J. U. Gilmour,"

Treasurer."

RECOMMENDATION 5. I STRONGLY RECOMMEND TO THE GOVERNMENT AND THE HYDRO ELECTRIC POWER COMMISSION, THAT WHEN THEY ARE DECIDING THE DATE FOR COMMENCEMENT OF CONSTRUCTION OF RADIAL RAILWAYS, VERY GREAT WEIGHT SHOULD BE GIVEN TO THE PRESENT STATE OF UNEMPLOYMENT. THE GOVERNMENT COULD HELP A GREAT DEAL BY COMMENCING WORK ON SUCH A PUBLIC UTILITY AS RADIAL RAILWAYS, WHEREBY MANY MEN COULD EARN WAGES AND THE GOVERNMENT OBTAIN RETURN IN LABOUR FOR THE MONEY EXPENDED.

It is impossible to urge too strongly the preceding recommendation. The unemployment situation is such as to make it the imperative duty of the Ontario Government to proceed with the construction of useful public utilities, so that citizens can earn wages and give return in useful employment. In my opinion, there is a real opportunity to help the unemployed situation by hastening the construction of this great public enterprise. Great strength is added to this because of the fact, that the Province has embarked on a programme of radial railways, and has already invested much money in the scheme and the proposal, as outlined, will aid in the development of a greater and more prosperous province.

RECOMMENDATION 6. THE HYDRO ELECTRIC POWER COMMISSION SHOULD HAVE, AS A MEMBER, ONE OF THE BEST AND MOST EXPERIENCED RAILWAY MEN IN OPERATING AND TRAFFIC WHO CAN BE FOUND. SUCH A RAILWAY EXPERT WOULD BE OF GREAT ASSISTANCE TO CHIEF ENGINEER GABY, WHOSE DUTIES IN CONNECTION WITH THE POWER PROJECTS ARE ONEROUS NOW, AND UPON WHOM MUCH OF THE WORK CONNECTED WITH RADIALS IS LIKELY TO FALL. LEGISLATION MAY HAVE TO BE PASSED TO INCREASE THE NUMBER OF MEMBERS ON THE COMMISSION, BUT SUCH AN EXPERIENCED RAILWAY AUTHORITY SHOULD BE OBTAINED WITHOUT DELAY AND PLACED IN A POSITION WHERE HE COULD BE OF GREATEST ASSISTANCE TO THE HYDRO ELECTRIC POWER COMMISSION. THIS IS NO REFLECTION UPON ANY OF THE ENGINEERS OF THE HYDRO COMMISSION, BUT A RECOMMENDATION TO ASSIST THE GOVERNMENT AND THE COMMISSION IN A GREAT PUBLIC PROJECT OF MAGNITUDE.

It is obvious that with a proposal from the Hydro Electric Power Commission to embark upon a scheme involving the building or acquiring of 327 miles of electric railways consisting of five divisions, and an ultimate investment in 1935 of approximately $50,000,000 that one of the members of the Hydro Electric Power Commission should be a railway authority on operation and traffic. The Commission, in my opinion, will be greatly strengthened by the experience and knowledge of such a member.

RECOMMENDATION 7. THE UTMOST CO-OPERATION AND FRANKNESS SHOULD GOVERN THE RELATIONS OF THE HYDRO ELECTRIC POWER COMMISSION WITH THE GOVERNMENT AND THE GOVERNMENT WITH THE HYDRO ELECTRIC POWER COMMISSION, IN THIS GREAT PUBLIC ENTERPRISE OF PUBLICLY OWNED AND OPERATED RADIAL RAILWAYS. THERE CAN BE ONLY ONE PURPOSE AND THAT IS THE PROGRESS AND WELFARE OF THIS GREAT PROVINCE. THE SCHEME OF RADIAL RAILWAYS OUTLINED BEFORE THE ROYAL COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION, AMPLIFIED AND IMPROVED BY EXPERTS IN EVIDENCE BEFORE THE COMMISSION, WILL BE OF IMMENSE BENEFIT TO THE TERRITORY INVOLVED AND THE PROVINCE AS A WHOLE, AND THERE IS EVERY REASON TO BELIEVE CONFIDENTLY THAT THE RADIALS WILL BE SELF-SUPPORTING, PROVIDING SERVICE AT COST TO THE CITIZENS AND ENSURING A HEALTHY DEVELOPMENT AND PROGRESS FOR ONTARIO WHICH THE LACK OF SUCH TRANSPORTATION FACILITIES WILL SERIOUSLY OBSTRUCT.

IN CONCLUSION OF THE RECOMMENDATIONS: The radial scheme as conceived by the municipalities and the Hydro Electric Power Commission and brought up to date before the Royal Commission, combined with the later estimates and suggestions of Mr. Arnold and his staff, and other experts, provides a good basis for the endorsement of radial railways for Ontario.

The Toronto-St. Catharines Division, as suggested in this Report, is the best division on which to begin construction as early as possible.

There have been changes made in the estimates, due partly to the evolution of the steam railways from private to public ownership. The engineers of the Hydro Commission have taken advantage of changing steam railway ownership to improve the scheme. They will take every opportunity to further strengthen the estimates as a result of the information derived from many experts. There can be no objection to improvements being made.

The Arnold estimates made at a later date when costs were declining, will be of great advantage to the Hydro Engineers.

It is not sound judgment to discourage a great public project because engineers are compelled to change the estimates with changing conditions.

It was suggested during the investigation that endorsement of radial railways by the Province would be a blow to public ownership. That is not a new argument. In my opinion, many great publicly owned enterprises had to face such arguments, and the arguments were silenced by success crowning the efforts of those confident in the principle of public ownership and operation.

Respectfully submitted,

(Sgd.) Fred Bancroft.

DESCRIPTIONS OF EXTRACTS FROM EVIDENCE WHICH FOLLOW IN THE REPORT.

(1) Engineer Arnold's conclusions in Exhibit 206, where, after a most thorough investigation by himself and his able assistants, he states the scheme is "feasible" and "its success can be reasonably expected."

(2) F. A. Stoffel of the Westinghouse Electric Company, freight traffic expert, with twenty years' railway experience, after examining the freight estimates of the Hydro Engineers strongly supports the estimates.

(3) Engineer Arnold describes in Exhibit 206, the investigation he was asked to make, and in part states, "It was understood that my report should include an unbiased statement of my opinion with regard to the adequacy of the facilities, and the estimated cost thereof and the probable results from operation in the way of revenues obtained and operating expenses incurred."

(4) General Manager Rodger of the Detroit United Railways states the Detroit United Railways paid 8 per cent. on $15,000,000 worth of common stock and interest charges in 1920.

(5) W. M. Neal, assistant general superintendent for the Ontario District of the Canadian Pacific Railway gives as his opinion that short haul suburban passenger traffic up to 15 miles is not steam railway business.

(6) R. I. Todd describes the arrangements between the city street railway of Indianapolis and interurban railways, whereby radials entering the city over the surface tracks share the revenues with the street railway company.

(7) Exhibit 232. Extract from speech delivered by President R. I. Todd before a meeting of the Central Electric Railway Association at Toledo, February 24th, 1921, in which he discusses the future of electric railways, and outlines the conditions under which "electric railway securities will be among the most stable and solid investments anywhere to be found."

(8) R. C. Rifenberick's application of Inter-State Commerce Commission's accounting system to the Hydro Radial scheme shows, in my opinion, that it is doubtful if any railway in North America could survive the test as applied.

(9) W. F. Tye who joined in an adverse report in 1917 against the Port Credit to St. Catharines electric line, gave evidence stating that the Toronto-Hamilton line was duplication of existing railway lines. In my opinion, he should have obtained more information about the transportation necessities in this territory before reaching this decision, as his evidence indicates:—

EXTRACTS FROM THE EVIDENCE.

(1) BION J. ARNOLD: "IN CONCLUSION: In conclusion, the result of the Investigation of the proposed system of Hydro Electric Radials herein reported on may be reviewed in brief as follows:

"FIRST: The territory considered from the point of population density, business activity, future business possibilities on account of the availability of Hydro-Electric Power, is second to none in the Province of Ontario and probably in the Dominion of Canada.

"SECOND: On account of the peculiar transportation situation in Toronto, the transportation facilities have not been as fully used as the commercial importance of this metropolitan centre would warrant, and with the particular situation removed by the construction of adequate transportation facilities, patronage of such facilities should grow at a remarkably rapid rate. The furnishing of high grade interurban service throughout the entire territory will greatly add to the facility of all business and industry in this area and should be considered as supplemental rather than antagonistic to the existing steam road service.

"THIRD: The facilities planned by the Hydro Electric Power Commission are in general quite adequate to furnish a very high grade interurban service throughout the territory. The highest type of construction both of roadbed and car equipment has been planned, which naturally results in a comparatively high initial cost, but when the project is viewed with reference to its projected life, it is quite probable that the higher initial expenditure accompanied by the higher grade of service may be rendered, and will in the long run be cheaper, and in any case, from the date of its completion and operation, will provide the territory served with

transportation facilities commensurate with the necessity of the highly developed manufacturing and business territory.

"On account of the uniform high standard of construction and the character of the facilities estimated on, the full benefit of which will not be realized without proper terminal facilities, there have been added to the system as originally planned certain items such as the subway terminal in Toronto and some additional double track, which it is believed will add revenue to an extent that will more than justify the added cost.

"FOURTH: The estimate of the cost and operating expense indicates that from the time when the system as a whole is well under operation, there will be a small surplus after all operating and fixed charges have been met, and that for the later periods the surplus will have a substantial growth.

"FIFTH: The entire electric transportation system and the character and scope of the service which it proposes to furnish are all conceived along broad lines. While the system as a whole cannot be compared with any existing interurban system, combining as it does rapid transit, suburban and interurban passenger features with dispatch and carload freight traffic, yet each of these classes of service has its parallel in existing systems and when an analysis of the estimated operating results of these various classes of service has been made, they lead to the conclusion that the project herein outlined as a whole is FEASIBLE AND THAT IF CONSTRUCTED AND OPERATED UNDER COMPETENT MANAGEMENT WITH THE SUPPORT OF THE COMMUNITIES SERVED, ITS SUCCESS CAN BE REASONABLY EXPECTED."

EXTRACT FROM EVIDENCE.

(2) F. H. STOFFEL: "F. H. STOFFEL of the Westinghouse Electric Company, stated in his evidence that he had about 20 years' experience in railway work particularly identified with the freight traffic portion of the business.

For some time past he has been engaged in the work "of dealing with the matter of freight transportation for the purpose of, and in connection with advising of electric railroads as to methods of handling freight and improving their freight business."

PAGE 6635—MR. F. H. STOFFEL.

"Q. If your service is fixed, and certain, and at fixed times, and you are able to make it by reason of the electric operation, does that affect the facility of delivery through the freight house? A. You mean with reference to schedules?

"Q. Yes, with reference to scheduled movements, and with reference to the shippers, the ability to come and get his material rapidly? A. Yes. The fact of getting it ready for delivery early is usually an object to a shipper or receiver of freight, because he is glad to get it on his shelves ready for sale. That is particularly true of merchants who do a smaller business and order stuff by telephone, or order through their jobber, and want it the next day. It is relieving them of the necessity of keeping a large stock on hand, and also having a large investment in stuff that is merely on the shelves, by getting it quickly and getting it where it can be sold, so turning over their investment more times, and therefore are better suited and satisfied.

"Q. I suppose we need scarcely mention the obvious situation in regard to perishable goods, such as fruits, vegetables and that kind of stuff, food products generally. I do not refer to canned or package foodstuff. Speed there is of great importance. A. In the handling of green stuff and fresh fruits and vegetables speed is absolutely essential. The business can hardly be carried on without speed.

"Q. And by speed you mean speed of delivery? A. Speed of delivery.

"Q. And in regard to all that class of traffic what do you say as to an electric road in dealing with that in comparison with the steam railroads? A. The electric road has proved itself absolutely to be able to give the most expedited service of any form of service for that particular class, not only on account of the speed is it more desirable, but also on account of the fact that goods reach destination in far better shape than they do when handled even by their own conveyances, such as trucks, or anything of that kind.

"Q. Then, Mr. Stoffel, having regard to what you have told us, what would you say as to the position of an electric railroad if you had one built, which had exclusively a private

right-of-way, and reached into a central terminal without having to pass over city streets and be subject to no restrictions as to handling freight? When I say subject to no restrictions, I mean subject to no legislative restrictions or municipal ordinances interfering with the handling of it as might be seen fit. What would you say as to the position of a road such as that to obtain freight? A. I should say that the road would be extremely fortunate, and that they would have no trouble at all in getting the freight.

"Q. You have looked over the location here, and have made a study of the plans, profiles and so on that have been put in here in regard to these different roads?

PAGE 6637.

"A. Yes, sir.

PAGE 6638.

"Q. The Toronto-Eastern, running out from Toronto about 40 miles to the east to Bowmanville; the Toronto & St. Catharines, running from here to St. Catharines, through Hamilton, about 70 odd miles; the proposed acquisition of the existing road, the Niagara Central, which touches Port Colborne, and through to Niagara Falls with the other branches it has, goes to Welland and other places mentioned, and also the proposed Hamilton-Galt and Elmira speaking of that road, and leaving out for the moment any reference to the Toronto Suburban Line—that is the one that runs from Toronto to Guelph, the proposed acquisition of that line—what do you say as to the facilities there proposed having regard to freight business? A. I believe that the plans which I have seen and the proposed connecting links to make up the unified system are exceedingly feasible and would prove exceedingly profitable.

"Q. When you say exceedingly profitable. . . .? A. I am speaking now from a freight standpoint. From a freight standpoint I think a reasonable return on the freight operating investment would result.

PAGE 6640.

"Q. Is there any other which strikes you that would be at all comparable? A. No, I don't believe there is any other I know of, in fact, most of these roads over there, electric lines, were constructed for passenger business, and they have hardly begun to go into the freight, and so they are not comparable with the proposed plans which you have for the proposed electric operation here.

"Q. I was having regard not so much to their original purposes and the method in which they operate as to the facilities which they have? A. There are none with facilities such as you propose at all, nor with the physical conditions which you propose.

"Q. Then Mr. Stoffel, did you make any examination into the estimates that were made of freight traffic for these different lines? A. Yes, sir.

PAGES 6641-2.

"Q. Taking for instance, in the first instance, the Toronto and Eastern, that being the most easterly road, you observe there that the estimate was made upon a basis of about three tons per head of the population and that resulted in an estimated earning in 1925, which is put down as about the first year of operation, of about $5,100 revenue per mile of route—that is per route mile, not per single track mile, so as to avoid that confusion. Speaking of that, and from the examination you made into it, what would you say as to that as a freight estimate, an estimate of probable freight had you been asked to make one? A. I would think that was very conservative.

"Q. I might ask you there in regard to making an estimate and relating it to the population. Is that a method which you yourself pursue? A. I have followed that to some extent.

"Q. Then, the Toronto-St. Catharines is the next one, that for 1925 has a revenue which, taking it on the basis of the route mile is placed at $19,000 approximately, $19,030 is the figure it works out at; what do you say as to that, as to earnings per mile of route situated as that is, between certain points? A. Taken in connection with their possibilities of interline traffic with connections, I think that is very conservative.

PAGE 6643.

"Q. So that so far as comparing it on a basis of a road doing a real freight business—I am not speaking now of an electric line which is largely passenger and its freight is inci-

dental, the earning of $19,000 per mile does not strike a railroad man as being out of line so far as that is concerned? A. No, that is very low.

"Q. Then, the Hamilton-Galt-Elmira, that line, or rather route, which you observed, did you notice and consider the populations that were there situate? A. Yes.

"Q. And did you examine the survey that had been made of freight traffic for that proposed line? A. I did.

"Q. What do you say as to the estimate there? Which works out about in 1925 at $6,480—call it $6,500 a mile for the total 70 miles of route? A. I think that is very reasonable. PAGE 6644.

"Q. Then the Niagara-Central is already an operating road. Did you examine the figures and the estimates that were made in regard to that? A. I did.

"Q. What do you say as to that, with the new facility and the interline business, which is projected—what do you say as to the freight estimate made and which you examined on that road, which as you remember, works out about $10,000 per mile. A. I should think that with the unified system your operations would be increased and the revenues correspondingly.

EXTRACT FROM THE EVIDENCE.

(3) BION J. ARNOLD: "I beg leave to submit herewith my report on proposed Hydro Electric Radial Railways. This report has been made pursuant to your request for an investigation, on my part, of the lines and routes which it has been proposed that your Commission construct. It was understood that my report should include an unbiased statement of my opinion with regard to the adequacy of the facilities, and the estimated cost thereof and the probable results from operation in the way of revenues obtained and operating expenses incurred.

"In carrying on the study for and working out the details of this report, I have been assisted by members of my regular engineering staff who are accustomed to handle reports of this nature. Our work has included inspection trips covering the territory to be served and of the lines now operating which it is proposed to include in the system.

"In connection with our investigation we have been supplied by your Commission with full information, including plans and estimates, relating to the facilities proposed and a large amount of general information with regard to the territory. With this information we have made independent studies of the probable traffic revenue and operating expense of the system, basing our judgment in respect to these matters upon such experience and data as have come to our attention through our engineering experience of the past twenty-five years.

"It has been found, as would naturally be expected, that there are, in matters of detail, differences between the findings herein contained and the estimates that have been prepared by your engineers. This is not surprising, since different engineers must bring to the consideration of a given problem the results of their own experience, and at many points in the detailed estimates, matters must be decided upon the judgment of those preparing the estimates. Such differences of experience and judgment will, necessarily, be reflected in the final estimates, which, although they may lead to the same general conclusion with regard to the feasibility of a given project, may vary in certain details.

"The general tendency in this report has been to prepare the estimates on a conservative basis. In studying the situation certain data have been considered, and certain conditions have been observed, which would indicate that some features of the situation would work out with an unusual advantage to an electric transportation system of the type proposed and it is possible that in working up our estimates we have not given full weight to these conditions which appear to exist, but have given more weight to our experience with similar systems in other territories which may not possess these particular local advantages. To whatever extent this may be true, our estimates would naturally fall below those of your engineers whose more intimate knowledge of the territory and conditions lead them to estimates which may more nearly represent the actual performance of this system, than do ours. Nevertheless, we are bound to submit our report in accordance with the situation as it appeals to our judgment and experience."

EXTRACT FROM EVIDENCE.

(4) W. S. RODGER: PAGE 7609. "COMMISSIONER BANCROFT: Q. Do you know what your total payroll was in the year 1920? A. No, sir; I have not figured it.

"Q. You paid 8% did you not, on $15,000,000? A. Yes.

"Q. $1,200,000? A. Yes.

"Q. That is on the common stock? A. Yes.

"Q. And you paid all your interest charges, your interest on your bonds? A. Yes.

"Q. You are speaking about a reduction in the cost of operation? A. Yes.

"Q. Do you think it is fair to talk about a reduction in wages while you are paying 8% on $15,000,000 on common stock? A. That is hardly a question for me to answer in connection with the management of the road, but aside from that I think those who put money into the property are entitled to a return of more than 4¾% average for 20 years. I do not think you and I would care to invest our money at that rate nowadays.

"Q. But supposing you took the wages of these men for the last twenty years, you would find they were pretty low, too? A. No, the Detroit United has had the reputation of paying the conductors and motormen at least as high if not the highest wages paid in any city in the United States and operating at as low a fare as any city. We have never been over the present fare of six cents and have had that only since last June, and as a matter of fact we do not get six cents because about 82% of the passengers buy tickets that cost them 5½ cents or 9 for 50 cents. Wages in all classes of labour in our territory have had reductions."

EXTRACT FROM EVIDENCE (5) W. M. NEAL. PAGE 2005-6.

"Q. Now please do not take the question I am about to put to you offensively, because I assure you I have no intention of appearing offensive. But have you the tradition of the steam railroad man that seems in Canada, at any rate, to dislike suburban service? A. I would not say that.

"Q. It seems—this is merely an inference largely of my own but it has been obtained from having observed a few controversies in the Railway Board—that around Toronto your sister or rival road, the Grand Trunk, seems to be especially opposed to suburban service, and the C. P. R. avoids getting into anything of the kind. Is that really the steam railroad man's idea? A. Strictly speaking, the short haul suburban traffic within a radius of five, ten or fifteen miles, it has been said, is not railroad business, and I do not think it is.

"Q. And I suppose then that so far as that is concerned you have placed the figures—what number of miles? A. Five, ten or fifteen.

"Q. Yes? A. That business is practically suburban street car traffic.

"Q. And you concur in the view that that is not steam railroad business? A. Yes.

"Q. You would like to leave that to some electric or other kind of line which could give that service more satisfactorily at any rate than you think steam roads can handle it? A. (No answer.)"

EXTRACT FROM EVIDENCE. MR. R. I. TODD. PAGE 11822.

"(6) So since 1916 we have been hauling live stock but it has been at the sufferance of the City.

"Q. That is what I have in mind? A. The Farmers' Association there went to the Legislature to make it a sure proposition, and had this bill put through in an emergency session last summer.

"Q. Any by-laws of the City of Indianapolis to the contrary notwithstanding? A. That is the idea.

"MR. HELLMUTH. Q. At all events you do haul right through? A. Yes sir.

"Q. But that does not apply to the closed freight car? A. Oh, no.

"Q. You have been doing that? A. Yes, sir.

"Q. There is no ordinance in Indianapolis that prevents you taking a freight car through the streets? A. No.

"COMMISSIONER BANCROFT: "Q. You have to come over the city surface lines? A. Yes.

"MR. HELLMUTH: Q. You are the owners of those lines, your system owns them? A. We are two separate companies.

"Q. But you have a controlling interest? A. The city company controls the city tracks and the interurban is operated on the same basis; every interurban coming into Indianapolis operates on the same basis.

"Q. But the two systems are controlled practically by the same interests? A. The interests are very largely the same.

"Q. They are intertwined? A. Yes.

"Q. And neither system is working to prevent the other system from earning any money that it can? A. No, there is a mutuality of interest.

"Q. I was going to ask you—Mr. Commissioner Bancroft put it into my mind that I was going to come to it—when you are coming in over the city streets and strike the city limits, do you as a matter at least of bookkeeping, if nothing else, pay to the City anything for running your interurban cars over there? A. Absolutely.

"Q. So that you have to make a payment or compensation for that. How is that arranged? Is that on a car mile basis? A. The passenger business on the basis of three cents for the use of tracks and for power outside the terminal, and one cent for the use of the terminal, and the freight business.

"Q. Let us get the passenger first, three cents and one cent? A. Yes.

"Q. Four cents for every passenger. A. Yes.

"Q. So you pay on the basis in bringing your passengers into the terminal of four cents? A. Yes.

"Q. And that terminal is most advantageously situated in regard to the city? A. One of the best in the United States.

"Q. That is to say, you are taking the passengers to the point to which, if you had your choice, you would take them? A. Within one square of the commercial centre, and half a square of the geographical centre of Indianapolis.

"Q. So your terminal is ideally situated for the purpose of picking up and delivering passengers in Indianapolis? A. Yes.

"Q. And for the right of the interurban road to enter their terminal so far as passengers are concerned, it pays for every passenger it carries inside the city limits four cents; that is three cents for the travel and one cent for the terminal, making four cents? A. Yes."

"(7) EXTRACT FROM EVIDENCE. R. I. TODD. The most important problem before the street and interurban railways at the present time is the restoration of their financial credit with the Bankers and the investing public. Emerging as they now are from a period of depression and financial starvation due to a lack of co-operation and appreciation of their true situation on the part of the public, and, in many cases, a ruinous indifference on the part of federal, state and city authorities, the financial condition of many of these companies is very precarious. Yet, without the financial oxygen, which was so freely administered by the Federal Government to the steam railroads and numerous manufacturing industries during the late world war, the electric railways of the country have, heriocally struggled for several years past, for their very existence, all the time faithfully serving the public while their stockholders have suffered heavy and in some cases, irreparable losses.

"If our electric railways have thus shown such staying powers in the midst of what seemed insurmountable obstacles, is it not positive proof that with adequate fares and just regulation they will be able to render such service in the carrying of passengers and freight as will contribute perhaps more than any other one factor to the great upbuilding of our American cities and towns and play a most important part during the present and coming period of reconstruction?

"This fact is recognized by some of the greatest financiers of the country, who have freely expressed the opinion that with proper rates of fare, electric railway securities will be among the most stable and solid investments anywhere to be found and compare favourably with municipal bonds and other first class securities. If this is true, as it undoubtedly is, a great civic and moral responsibility rests upon rate-making bodies everywhere to see that such fares are allowed in the interest and welfare of the great body of the public and the growth and upbuilding of the cities and towns.

"The fare question is one which is now engrossing the most careful attention of the heads of all electric railway companies. If those which are still solvent are not to follow the financial disaster which has befallen hundreds of others, rates must be allowed which will provide a fair return on the investment and afford means for efficient operation and necessary extensions. This must be done whatever the rate plan may be. City and state authorities sometimes fail to recognize this very evident fact, and very recently in Louisville, Ky., the federal court was appealed to on the ground that to require a company to furnish transportation facilities at a loss was confiscation of property. The court recognized the merits of this appeal and promptly permitted the company to charge a rate of 7 cents.

"FEDERAL DECISION ON RATES. Recent federal decisions which make steam railroad passenger and freight rates in the states of Ohio, Indiana and Illinois conform with interstate commerce rates, namely, 3.6c per passenger mile and approximately 40% advance on freight rates, are bound to have a favourable effect upon interurban passenger and freight business either by diversion to the interurban of many interstate passengers or by giving basis for an increase in interurban freight rates and fares, or both. In the readjustment of prices of commodities, in order to get back to normal conditions, it is clearly evident that labour must bear its fair share in the general reduction. An equal distribution of financial burdens is imperative, if we are to reach a sound, economic basis.

"THROUGH PASSENGER AND FREIGHT TRAVEL. A matter calling for our serious consideration is the development and encouragement of through travel over long distances without change of cars. Experience has shown that with proper facilities and publicity such service can be made very popular and profitable. Where such service has once been established, and for one reason or another temporarily discontinued, it has taken great effort to re-establish it. We believe that through fast inter-urban trains are in demand, particularly between points where steam railroad trains are infrequent and unsatisfactory. Excellent through interurban service is now being furnished by some of our member companies. Perhaps the greatest recent development along these lines is that inaugurated by the Interstate Public Service Company of Indiana, which has just added to its equipment a number of handsome and commodious steel passenger cars with trailers which run at frequent intervals between Indianapolis and Louisville.

"No less important from a revenue standpoint is the operation of through freight and express cars which avoid the delay and loss caused by transferring shipments en route.

"Local, freight service should also be improved. If interurban companies are to recoup their passenger losses on account of automobile travel, they will find it imperative to greatly develop their freight business. This fact I think is recognized by all.

"A committee of this association is already considering motor truck competition and will make its report in due time.

"While we are now passing through a period of "hard times" the future is full of promise. No line of industry has had to bear more burdens during the last few years than the electric railways of this country, and no industries have shown more grit, loyalty and determination in the face of what seemed almost insurmountable obstacles. This gives hope for the future, so much so, that President Gadsden of the American Electric Railway Association in a recent address assured us that:

"With the revenues of electric railways adjusted so as to cover the cost of operation and provide an adequate return upon investment at all times, the credit of electric railways, provided we have proper financial structures, will rank next to municipal securities."

"Extracted from Electric Railway Journal.
March 5th, 1921, page 445."

(8) EXTRACT FROM EVIDENCE. R. C. RIFENBERICK. PAGE 11622.

"Q. Applying your system of cost and everything else, is there any road in the United States any place, a steam road or anything else, that would come out with a surplus?

"A. Are you talking of steam roads?

"Q. I am talking of steam roads, too. Applying this system of testing them out as to whether they are financially successful is there an interurban road or steam road in Canada or the United States that would survive this test?

"A. The Detroit, Munroe & Toledo in 1919 survived it.

"Q. Do you know any other case that would survive it?

"A. They will, if they get the proper return.

"Q. But do you know any other case that will survive this test of yours that you have applied here?

"A. None of these roads I have tested out—I will be glad to test out any road on that.

"Q. Would you tell me of any steam road?

"A. I am not now familiar with steam road operation.

"Q. Can you tell me one road that would survive this test, any road in operation at the present time?

"A. I do not think there is any road in the United States that would survive any reasonable test today at the rates they have been permitted to charge. Elecric railways in the United States are in a very precarious condition and have been for a number of years.

"MR. MCKAY: Steam roads are not better. The Pennsylvania Railroad would not survive this test, or the New York Central. I doubt if there is one except the D.L. & W. and I do not think it would."

(9) EXTRACT FROM EVIDENCE. W. F. TYE. PAGE 1815-6.

"Q. What do you think of the point of view that may be advanced, that it may be duplication of track, but it is not a duplication of service, building an electric line from Toronto to Hamilton, say?

"A. I do not understand where the distinction could come in.

"Q. You mean it would be a duplication of service, too?

"A. I mean there is a duplication of railways, and they both handle passengers and freight; I am anxious to answer your question, but I do not get the distinction.

"Q. Do you mean both would be competing in all the service that is rendered at present? A. Yes.

"Q. What service is there on the steam roads from Toronto to Hamilton that an electric line would duplicate if it was built?

"A. The hauling of passengers from Toronto to Hamilton.

"Q. What service is given on the steam road from Toronto to Hamilton?

"A. The Grand Trunk, I think, runs about nine trains a day.

"Q. Do you know what time they go?

"A. No; I have not had occasion—always when I travel from Toronto to Hamilton I go over the Canadian Pacific, because I get there so much quicker.

"Q. Did you ever stop between Toronto and Hamilton on the Canadian Pacific?

"A. I never did.

"Q. Did you ever stop at all on your travels between Toronto and Hamilton?

"A. In getting off the trains?

"Q. Yes?

"A. I have been in Oakville and places like that. When I say that I always go by the Canadian Pacific, I mean to say I generally go by the Canadian Pacific.

"Q. Have you any idea what time the train—I suppose you know there is only one steam service that stops between Toronto and Hamilton?

"A. Yes.

"Q. Only one line double track, one service?

"A. Only the Grand Trunk.

"Q. Do you know what time they leave in the morning?

"A. No.

"Q. Do you know what time people in Bronte can get away to Toronto.

"A. No.

"Q. Do you know what time they leave at night.

"A. No.

"Q. Why do you say there is no public necessity for the building of a radial if you do not know that; what led you to come to that conclusion?

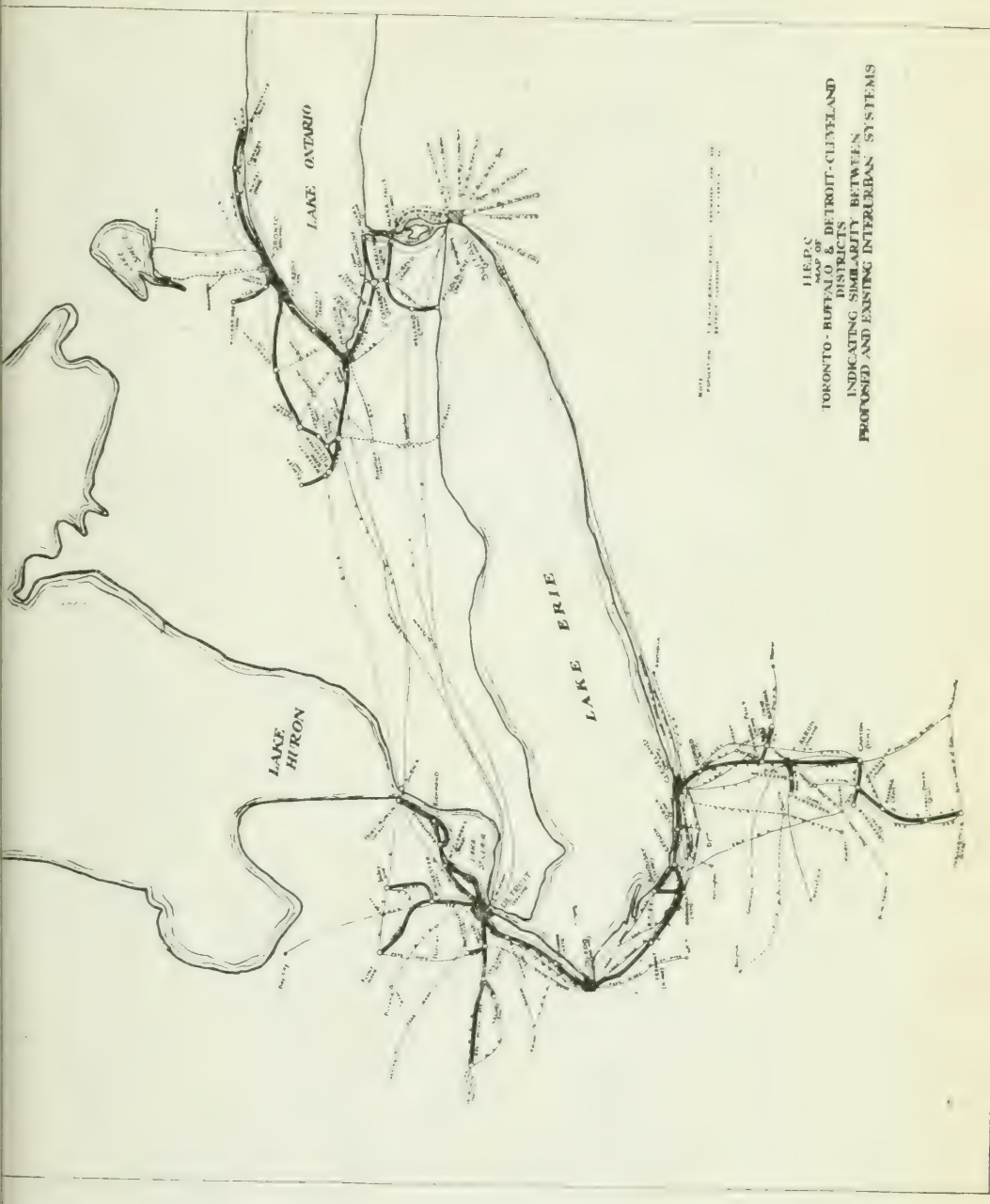
"A. I come to that conclusion—if there is business there that the railroads will handle it, that the railroads will handle that particular business; I said also before that if the electric road, and I was particular to say that if the electric road gave better service it would get the business."

APPENDICES.

1. Royal Commission with Government statement of July 6th, 1920 attached. (The original is an appendix to the Majority Report.)
2. Map showing comparison between Detroit-Cleveland combination and Hydro System and International Railway Line to Buffalo.
3. "Statement showing summary of estimated cost of acquiring and constructing the proposed Hydro Radials" by Price Waterhouse & Company.
4. "Report of the Federal Electric Railways Commission" of the United States (Report is Appendix No. 9 to the Majority Report).
5. Attention is drawn particularly to Exhibits mentioned and quoted in this Report.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

(Signed) Fred Bancroft.


LAKE ONTARIO
LAKE ERIE
LAKE HURON
H.E.P.C
MAP OF
TORONTO - BUFFALO & DETROIT - CLEVELAND
DISTRICTS
INDICATING SIMILARITY BETWEEN
PROPOSED AND EXISTING INTERURBAN SYSTEMS

STATEMENT SHOWING SUMMARY OF ESTIMATED COST OF ACQUIRING AND CONSTRUCTING THE PROPOSED HYDRO ELECTRIC RADIALS PREPARED FROM ESTIMATES SUPPLIED THE RADIAL RAILWAY COMMISSION BY THE HYDRO ELECTRIC POWER COMMISSION.

Period	Ending	Toronto, Port Credit, Hamilton, St. Catharines Line	Toronto Eastern Line	Hamilton Guelph, Galt & Elmira Line	Toronto Suburban Line	Niagara Central Line	Total	Total Estimated Cost of Acquiring and Constructing the Proposed Hydro Electric Radials, up to and including 1925 (1)	1930 (2)	1935 (3)
	1921	$			2,915,900 00	4,363,830 00	7,279,730 00			
No. 1	1925	20,603,953 30	9,164,132 35	7,192,895 00	675,874 00	727,500 00	38,364,354 65	$45,644,084 65		
No. 2	1930	726,600 00	933,568 65	207,000 00	178,400 00	678,500 00	2,724,068 65		$48,368,153 30	
No. 3	1935	1,262,100 00	903,702 00	309,800 00			2,475,602 00			
TOTAL		$22,592,653 30	11,001,403 00	7,709,695 00	3,770,174 00	5,769,830 00	50,843,755 30			$50,843,755 30

NOTE:

1.—Items marked No. 1 represent estimated cost for the period ending 1924—1925 and 1926, which for the purposes of this statement have been treated as "1925."

2.—Items marked No. 2 represent estimated cost for the period ending 1929—1930 and 1931, which for the purposes of this statement have been treated as "1930."

3.—Items marked No. 3 represent estimated cost for the period ending 1934 and 1935, which for the purposes of this statement have been treated as "1935".

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FIFTY-SECOND ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

Hospitals and Charitable Institutions

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 30th SEPTEMBER

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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1922

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PARLIAMENT BUILDINGS
TORONTO, 15th December, 1921

To His Honour HENRY COCKSHUTT, Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fifty-scoend Annual Report upon the Hospitals and Charitable Institutions of Ontario, being for the official year ending September 30th, 1921.

I have the honour to be,

Your Honour's obedient servant,

H. C. NIXON,

Provincial Secretary.

Office of the

Inspector of Prisons and Public Charities, Ontario.

Parliament Buildings, Toronto, 8th December, 1921

Sir,—I have the honour to transmit herewith, to be presented to His Honour the Lieutenant-Governor, the Fifty-second Annual Report upon the Hospitals and Charitable Institutions, etc., for the official year ending September 30th, 1921.

I have the honour to be, Sir,

Your obedient servant,

Alex. MacKay, M.D.

Inspector.

The Honourable H. C. Nixon, M.P.P.,
Secretary of the Province of Ontario,
Toronto

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Hospitals and Charitable Institutions

In presenting the fifty-second annual report on the Hospitals and Charitable Institutions for the year ending September 30th, 1921, I beg to state that there are at present in Ontario:—

105 Public Hospitals, including 9 Sanatoria for Consumptives.
49 Private Hospitals.
41 Refuges.
30 Orphanages.
3 Convalescent Homes.
31 County Houses of Refuge.

These have, as far as possible, received official visits of inspection during the year, and those entitled to Government aid in accordance with the Statute have shared in the grants voted by the Legislature for Hospitals and Charities.

The Hospitals.

The record of the year indicates the continued success and progress of the Hospitals of Ontario:

Number of patients in the hospitals, October 1st, 1920	7,011
Number of patients admitted during the year	115,442
Number of births in the hospitals during the year	12,235
Total number under treatment during the year	134,688

The above figures do not include those who received medicine and treatment as outdoor patients.

Number of deaths during the year	6,240
Percentage of deaths to number under treatment	4.63
Total number of days' stay in the hospitals	2,381,800
Provincial grant to hospitals for the past year	$843,267.25
Amount received from all sources during the year	7,485,068.66
Subscriptions, donations, etc., during the year	817,825.22
Total expenditure for hospitals (including capital account, $2,114,575.76) during the year	9,885,086.35
Average cost for each patient per day	3.22
Percentage of Provincial grant to total maintenance expenditure	9.6

Provincial Aid to Hospitals.

1. A Provincial grant is made for all patients in a hospital during the first ten years of its existence at the rate of fifty cents per day, irrespective of what sum is contributed by the patients themselves.

2. After a hospital has been in existence for ten years the grant is paid only for patients for whose maintenance $10.50 per week or less is contributed.

3. In all cases the limit is 120 days, and if the patients remain in the hospital longer than that period the refuge rate of ten cents per day is allowed.

4. No allowance is made for infants born in hospital.

Aid to Sanatoria for Consumptives.

1. A grant of $4,000 on the erection and satisfactory equipment of the necessary buildings.

2. A grant of seventy-five cents per day for the maintenance of each indigent patient.

These grants to be in consideration of proper accommodation being provided, and only to assist in the maintenance of indigent patients coming from the Province of Ontario. There were 3,133 patients cared for in the nine different Sanatoria for Consumptives during the past year.

The Year's Work in the Hospitals.

The number of patients cared for in the Public Hospitals of Ontario during the past year was 134,688.

The total expenditure for maintenance and equipment during the year was $7,770,510.59.

TABLE I.—Showing the general movements in each hospital separately

Hospitals.	Location.	Capacity in beds	Number remaining under treatment on 1st Oct. 1920	Number admitted during the year ending 30th Sept. 1921.	Number of births in hospital during the year.	Total number under treatment during the year ending 30th Sept., 1921.	Number discharged during the year.	Number who died during the year.	Number remaining under treatment on 30th Sept., 1921
Rosamond Memorial Hospital	Almonte	21	4	180	44	228	203	11	14
General Hospital	Barrie	75	38	782	92	912	852	28	32
General Hospital	Belleville	80	38	1,263	147	1,448	1,316	79	53
General Hospital	Bowmanville	21	12	237	61	310	276	18	16
General Hospital	Brantford	150	97	2,378	300	2,775	2,527	136	112
Brant Sanitorium	"	24	25	35		60	21	10	29
General Hospital	Brockville	70	42	967	82	1,091	990	57	44
St. Vincent de Paul Hospital	"	100	49	1,018	89	1,156	1,081	29	46
General Hospital	Chatham	65	38	1,149	73	1,260	1,188	32	40
St. Joseph's Hospital	"	100	43	890	136	1,069	985	43	41
Lady Minto Hospital	Chapleau	20	8	287	31	326	310	8	8
Clinton Public Hospital	Clinton	12	4	173	28	205	201	4	
Cottage Hospital	Cobourg	34	12	324	46	382	347	23	12
Lady Minto Hospital	Cochrane	29	18	329	52	399	358	13	28
General and Marine Hospital	Collingwood	60	28	534	29	591	538	25	28
General Hospital	Cornwall	60	21	619	60	700	623	34	43
Hotel Dieu Hospital	"	105	39	1,120	92	1,251	1,159	50	42
Haldimand Co. Memorial Hospital	Dunnville	16	15	226	28	269	251	16	2
Royal Alexandra Hospital	Fergus	60	17	353	25	395	355	23	17
McKellar General Hospital	Fort William	165	80	2,835	228	3,143	2,921	108	114
General Hospital	Galt	80	52	1,061	218	1,331	1,225	66	40
General and Marine Hospital	Goderich	15	8	185	36	229	214	8	7
Muskoka Cottage Sanatorium	Gravenhurst	103	74	162		236	165	6	65
Muskoka Free Hospital for Consump.	"	266	237	423		660	419	22	219
General Hospital	Guelph	100	66	1,372	100	1,538	1,421	61	56
St. Joseph's Hospital		68	36	863	101	1,000	911	52	37
Providence Hospital	Haileybury	89	27	998	34	1,059	975	54	30
City Hospital	Hamilton	509	339	7,981	853	9,173	8,284	493	396
St. Joseph's Hospital	"	129	77	2,589	108	2,774	2,598	86	90
Mountain Sanitorium	"	186	176	189		365	134	41	190
General Hospital	Ingersoll	30	10	191	44	245	212	20	13
General Hospital	Kenora	40	11	189	30	230	207	7	16
St. Joseph's Hospital		40	15	264	8	287	257	18	12
General Hospital	Kincardine	18	5	225	35	265	250	5	10
General Hospital	Kingston	200	129	3,312	148	3,589	3,331	122	136
Hotel Dieu Hospital	"	200	103	1,928	159	2,190	2,001	93	96
Kitchener and Waterloo Hospital	Kitchener	69	55	1,165	100	1,320	1,228	63	29
Freeport Sanatorium	"	40		52		52	21	7	24
Ross Memorial Hospital	Lindsay	35	24	543	50	617	566	33	18
Listowel Memorial Hospital	Listowel	16	8	191	16	215	199	9	7
General Hospital	London	400	226	4,588	278	5,092	4,647	209	236
St. Joseph's Hospital	"	150	97	2,269	199	2,565	2,375	65	125
Bethesda Hospital	"	50	53	448	343	844	789	36	19
Victoria Home for Incurables	"	54	51	36		87	7	12	68
Queen Alexandra Sanatorium	"	310	280	349		629	362	29	238
General Hospital	Mattawa	45	16	271		287	254	17	16
General Hospital	Midland	20	393	55	16	464	428	19	17
Lady Minto Hospital	New Liskeard	35	9	248	26	283	253	20	10
Cottage Hospital	Niagara 'Lake	10		128	21	149	134	8	7
General Hospital	Niagara Falls	55	26	609	117	752	685	30	37
Queen Victoria Hospital	North Bay	36	23	587	65	675	628	26	26
General Hospital	Orangeville	16	11	193	37	241	226	10	5
General Hospital	Orillia	30	28	660	106	794	731	32	31
General Hospital	Oshawa	40	43	875	115	1,033	954	46	33
General Protestant Hospital	Ottawa	160	136	3,116	7	3,259	3,000	123	136
Roman Catholic Hospital	"	347	169	3,877	8	4,054	3,724	159	171
Maternity Hospital	"	27	33	647	613	1,293	1,228	18	47
Misericordia Maternity Hospital	"	230	143	333	282	758	591	2	165
St. Luke's General Hospital	"	150	109	2,374	2	2,485	2,290	69	126
Perley Home for Incurables	"	53	45	16		61	7	7	47
Royal Sanatorium	"	68	55	104		159	69	37	53
General and Marine Hospital	Owen Sound	62	46	824	121	991	905	51	35
General Hospital	Parry Sound	40	15	274	10	299	285	10	4
St. Joseph's Hospital		35	7	280	61	348	326	9	13
Cottage Hospital	Pembroke	32	21	465	45	531	499	16	16
General Hospital	"	150	53	1,019	63	1,135	1,044	43	48
General Hospital	Penetanguishene	15	4	134	29	167	156	9	2
Nicholls' Hospital	Peterborough	90	55	1,241	175	1,471	1331	76	64
St. Joseph's Hospital	"	56	32	917	73	1,022	966	25	31
C. E. Englehart Hospital	Petrolea	40	22	274	60	356	309	27	20
Prince Edward County Hospital	Picton	18	6	256	28	290	282	3	5
Railway, Marine and General Hospital	Port Arthur	32	34	754	102	890	824	42	24
St. Joseph's Hospital	"	150	40	1,029	130	1,199	1107	52	40
General Hospital	Port Hope	25	17	328	64	409	365	31	13
Victoria General Hospital	Renfrew	30	25	465	62	552	499	29	24
General and Marine Hospital	St. Catharines	80	59	1,181	307	1,547	1,434	55	58
Consumptive Sanitorium	"	25	4	44		48	29	7	12
Amasa Wood Hospital	St. Thomas	65	24	906	176	1,106	1,013	68	25
General Hospital	Sarnia	56	35	673	58	766	675	52	39
Royal Victoria Hospital	Sault Ste. Marie	25	14	583	33	630	581	27	22

TABLE 1.—Showing the general movements in each hospital separately.—*Concluded.*

Hospitals.	Location.	Capacity in beds.	Number remaining under treatment on 1st Oct., 1920.	Number admitted during the year ending 30th Sept., 1921.	Number of births in hospital during the year.	Total number under treatment during the year ending 30th Sept., 1921.	Number discharged during the year.	Number who died during the year.	Number remaining under treatment on Sept. 30th, 1921.
General Hospital	Sault St. Marie	90	51	907	81	1,039	962	39	38
Public Hospital	Smith's Falls	50	24	562	72	658	585	35	38
St. Francis' Hospital	"	70	24	467	65	556	485	29	42
General Hospital	Stratford	65	32	793	135	960	856	63	41
General Hospital	Strathroy	30	22	233	22	277	229	27	21
St. Joseph's Hospital	Sudbury	150	87	1,935	70	2,092	1,925	86	81
General Hospital	Toronto	730	527	10,938	1,337	12,802	11,666	588	548
Grace Hospital	"	128	99	2,577	443	3,119	2,884	107	128
Hospital for Sick Children	"	250	262	5,015	....	5,277	4,478	558	241
Orthopedic Hospital	"	36	23	438	....	461	435	2	24
St. John's Hospital	"	55	34	931	2	967	915	18	34
St. Michael's Hospital	"	325	232	4,842	452	5,526	4,962	288	276
Salvation Army Women's Hospital	"	21	60	428	400	888	836	34	18
Wellesley Hospital	"	75	86	2,005	271	2,362	2,227	47	88
Western Hospital	"	253	142	3,697	466	4,305	3,924	204	177
Women's College Hospital	"	50	51	872	347	1,270	1,193	26	51
Home for Incurable Children	"	32	28	12	....	40	10	....	30
Toronto Hospital for Incurables	"	240	217	98	....	315	24	67	224
The Preventorium	"	100	28	153	....	181	106	....	75
General Hospital	Walkerton	26	16	195	18	229	211	9	9
General Hospital	Welland	50	27	739	42	808	750	43	15
Toronto Free Hospital for Consump. King Edward Sanitorium Queen Mary Hospital for Children.	Weston	390	260	482	1	743	259	133	351
Grace Hospital	Windsor	56	32	721	143	896	835	38	23
Hotel Dieu Hospital	"	125	78	2,523	254	2,855	2,650	126	79
General Hospital	Wingham	25	2	203	15	220	200	12	8
General Hospital	Woodstock	60	28	664	84	776	703	42	31
Totals for 1921		10,264	7,011	115,442	12,235	134,688	121,442	6,240	7,006
Totals for 1920			6,710	115,341	11,924	133,975	120,232	7,229	6,714

TABLE II.—Showing the collective stay in days of the adult and infant patients, also the average length of time each patient was under treatment.

Hospitals.	Location.	No. of patients, including infants born.	Collective stay of infants under one year of age.	Collective stay of adult patients.	Total collective stay of adults and infants.	Average stay of each patient, including infants.
Rosamond Memorial Hospital	Almonte	228	352	2,333	2,685	11.7
General Hospital	Barrie	912	1,225	20,689	21,914	24.0
General Hospital	Belleville	1,448	1,586	13,594	15,180	10.5
General Hospital	Bowmanville	310	735	4,173	4,908	15.8
General Hospital	Brantford	2,775	3,878	38,207	42,085	15.2
"	"	60		9,275	9,275	154.6
Brant Sanatorium	Brockville	1,091	1,050	16,163	17,213	15.8
General Hospital	"	1,156	1,237	17,169	18,406	15.9
St. Vincent de Paul Hospital	Chatham	1,260	998	11,504	12,502	9.9
General Hospital	"	1,069	1,499	13,410	14,909	13.9
St. Joseph's Hospital	Chapleau	326	12	3,020	3,032	9.4
Lady Minto Hospital	Clinton	205	362	1,564	1,926	9.4
Clinton Public Hospital	Cobourg	382	493	3,618	4,111	10.8
Cottage Hospital	Cochrane	399	745	5,631	6,376	15.9
Lady Minto Hospital	Collingwood	591	354	9,541	9,895	16.7
General and Marine Hospital	Cornwall	700	667	10,146	10,813	15.4
General Hospital	"	1,251	858	15,367	16,225	13.0
Hotel Dieu Hospital	Dunnville	269	232	2,450	2,682	10.0
Haldimand County Memorial Hospital	Fergus	395	279	6,557	6,836	17.3
Royal Alexandra Hospital	Fort William	3,143	2,454	29,725	32,179	10.3
McKellar General Hospital	Galt	1,331	2,514	14,023	16,537	12.4
General Hospital	Goderich	229	1,161	2,748	3,909	17.1
General and Marine Hospital	Gravenhurst	236		25,327	25,327	107.2
Muskoka Cottage Sanatorium	"	660		71,023	71,023	107.6
Muskoka Free Hospital for Consumptives	Guelph	1,538	1,287	21,007	22,294	14.5
General Hospital	"	1,000	1,166	13,483	14,649	14.6
St. Joseph's Hospital	Haileybury	1,059	285	10,860	11,145	10.5
Providence Hospital	Hamilton	9,173	9,732	125,625	135,357	14.8
City Hospital	"	2,774	1,338	31 320	32,658	11.8
St. Joseph's Hospital	"	365		63,068	63,068	172.7
Mountain Sanatorium	Ingersoll	245	478	2,955	3,433	14.0
General Hospital	Kenora	230	349	3,227	3,576	15.4
General Hospital	"	287	98	8,643	8,741	30.4
St. Joseph's Hospital	Kincardine	265	429	3,038	3,467	13.1
General Hospital	Kingston	3,589	18	47,956	47,974	13.4
General Hospital	"	2,190	1,723	31,816	33,539	15.3
Hotel Dieu Hospital	Kitchener	1,320	1,088	12,389	13,477	10.2
Kitchener and Waterloo Hospital	"	52		4,416	4,416	84.9
Freeport Sanatorium	Lindsay	617	3,805	6,887	10,692	17.3
Ross Memorial Hospital	Listowel	215		2,810	2,810	13.1
Listowel Memorial Hospital	London	5,092	3,562	99,758	103,320	20.3
General Hospital	"	2,565	2,540	35,822	38,362	15.0
St. Joseph's Hospital	"	844	6	6,360	6,366	7.5
Bethesda Hospital	"	87		24,977	24,977	287.1
Victoria Home for Incurables	"	629		25,521	25,521	40.6
Queen Alexandra Sanatorium	Mattawa	287		5,033	5,033	18.3
General Hospital	Midland	464	599	4,215	4,814	10.4
General Hospital	New Liskeard	283	282	3,166	3,448	12.1
Lady Minto Hospital	Niagara-on-the-Lake	149		1,788	1,788	12.0
Cottage Hospital	Niagara Falls	752	1,295	7,387	8,682	11.5
General Hospital	North Bay	675	719	9,437	10,156	15.0
Queen Victoria Hospital	Orangeville	241	381	2,976	3,357	13.9
General Hospital	Orillia	794		9,239	9,239	11.6
General Hospital	Oshawa	1,033	1,712	10,735	12,447	12.0
General Hospital	Ottawa	3,259	35	50,952	50,987	15.3
General Protestant Hospital	"	4,054	4	61,220	61,224	15.1
Roman Catholic Hospital	"	1,293		7,971	7,971	6.2
Maternity Hospital	"	758	902	25,791	26,693	35.2
Misericordia Maternity Hospital	"	2,485	7	45,066	45,073	18.1
St. Luke's General Hospital	"	61		20,706	20,706	339.4
Perley Home for Incurables	"	159		20,661	20,661	129.9
Royal Sanatorium	Owen Sound	991	1,313	12,671	13,984	14.1
General and Marine Hospital	Parry Sound	299	223	4,230	4,453	15.2
General Hospital	"	348	669	3,699	4,368	12.6
St. Joseph's Hospital	Pembroke	531	618	6,275	6,893	13.0
Cottage Hospital	"	1,135	1,138	19,082	20,220	17.8
General Hospital	Penetanguishene	167	233	1,142	1,375	8.2
General Hospital	Peterborough	1,471	2,010	15,254	17,264	11.7
Nicholl's Hospital	"	1,022	871	10,980	11,851	11.6
St. Joseph's Hospital	Petrolia	356	801	6,171	6,972	19.1
C. E. Englehart Hospital	Picton	290	308	1,877	2,185	7.5
Prince Edward County Hospital	Port Arthur	890	984	10,873	11,857	13.3
Railway, Marine and General Hospital	"	1,199	172	15,164	15,336	12.9
St. Joseph's Hospital	Port Hope	409	790	4,545	5,335	13.0
General Hospital	Renfrew	552	690	6,757	7,447	13.5
Victoria General Hospital	St. Catharines	1,547	3,409	17,302	20,711	13.4
General and Marine Hospital	"	48		4,180	4,180	87.1
Consumptive Sanatorium	St. Thomas	1,106	1,852	10,562	12,414	11.2
Amasa Wood Hospital	Sarnia	766	547	9,835	10,382	13.6
General Hospital						

TABLE II.—Showing the collective stay in days of the adult and infant patients, also the average length of time each patient was under treatment.—*Concluded.*

Hospitals.	Location.	No. of patients, including infants born.	Collective stay of infants under one year of age.	Collective stay of adult patients.	Total collective stay of adults and infants.	Average stay of each patient including infants
Royal Victoria Hospital	Sault Ste. Marie	630	..	6,431	6,431	10.2
General Hospital	"	1,039	.....	14,484	14,484	13.9
Public Hospital	Smith's Falls	658	746	8,814	9,560	14.5
St. Francis Hospital	"	556	815	8,633	9,448	17.0
General Hospital	Stratford	960	1,480	11,137	12,617	13.1
General Hospital	Strathroy	277	333	4,797	5,130	18.5
St. Joseph's Hospital	Sudbury	2,092	816	28,955	29,771	14.2
General Hospital	Toronto	12,802	.....	206,572	206,572	16.1
Grace Hospital	"	3,119	168	36,290	36,458	11.7
Hospital for Sick Children	"	5,277	...	92,123	92,123	17.5
Orthopedic Hospital	"	461	.....	7,225	7,225	15.7
St. John's Hospital	"	967	41	11,901	11,942	12.3
St. Michael's Hospital	"	5,526	163	83,047	83,210	15.1
Salvation Army Women's Hospital	"	888	6,793	14,823	21,616	24.3
Wellesley Hospital	"	2,362	2,810	28,707	31,517	13.4
Western Hospital	"	4,305	106	55,549	55,655	12.9
Women's College Hospital	"	1,270	...	12,772	12,772	10.1
Home for Incurable Children	"	40	...	10,712	10,712	267.8
Toronto Hospital for Incurables	"	315	...	81,029	81,029	257.2
The Preventorium	"	181	.....	23,051	23,051	127.4
General Hospital	Walkerton	226	246	3,536	3,782	16.5
General Hospital	Welland	808	409	7,824	8,233	10.2
Toronto Free Hospital for Consumptives	Weston	743	.....	110,676	110,676	149.0
King Edward Sanatorium						
Queen Mary Hospital for Children						
Grace Hospital	Windsor	896	1,552	7,015	8,567	9.6
Hotel Dieu Hospital	"	2,855	2,521	22,507	25,028	8.8
General Hospital	Wingham	220	199	2,319	2,518	11.4
General Hospital	Woodstock	776	859	11,518	12,377	15.9
Totals for 1921		134,688	93,216	2,288,584	2,381,800	17.7
Totals for 1920		133,975	127,667	2,295,541	2,423,208	18.1

TABLE III.—Showing the deductions which have to be made from the collective stay of patients for the protracted residence of incurables, lying-in cases, etc. For persons coming within these classes only ten cents per day is allowed.

Hospitals.	Location.	Collective days' stay, exclusive of infants under one year of age.	Deduct for incurables and lying-in cases for which only Refuge rate is allowed, also deduct the days' stay of patients who paid over $10.50 per week.	No. of days' stay for which hospital allowance is made.
Rosamond Memorial Hospital	Almonte	2,333	1,040	1,293
General Hospital	Barrie	20,689	10,257	10,432
General Hospital	Belleville	13,594	10,156	3,438
General Hospital	Bowmanville	4,173	113	4,060
General Hospital	Brantford	38,207	11,946	26,261
Brant Sanatorium	"	9,275		9,275
General Hospital	Brockville	16,163	9,296	6,867
St. Vincent de Paul Hospital	"	17,169	11,603	5,566
General Hospital	Chatham	11,504	11,327	177
St. Joseph's Hospital	"	13,410	9,300	4,110
Lady Minto Hospital	Chapleau	2,769	18	2,751
Clinton Public Hospital	Clinton	1,564	97	1,467
Cottage Hospital	Cobourg	3,618		3,618
Lady Minto Hospital	Cochrane	4,732	115	4,617
General and Marine Hospital	Collingwood	9,541	5,224	4,317
General Hospital	Cornwall	10,146	6,173	3,973
Hotel Dieu Hospital	"	15,367	3,615	11,752
Haldimand Co. Memorial Hospital	Dunnville	2,450	38	2,412
Royal Alexandra Hospital	Fergus	6,557	4,807	1,750
McKellar General Hospital	Fort William	27,687	14,361	13,326
General Hospital	Galt	14,023	8,145	5,878
General and Marine Hospital	Goderich	2,748	1,266	1,482
Muskoka Cottage Sanatorium	Gravenhurst	25,327	25,327	
Muskoka Free Hospital for Consumptives	"	71,023		71,023
General Hospital	Guelph	21,007	9,863	11,144
St. Joseph's Hospital	"	13,483	3,337	10,146
Providence Hospital	Haileybury	9,813	5	9,808
City Hospital	Hamilton	125,625	35,078	90,547
St. Joseph's Hospital	"	31,320	15,215	16,105
Mountain Sanatorium	"	63,068		63,068
General Hospital	Ingersoll	2,955	2,115	840
General Hospital	Kenora	3,227	1,237	1,990
St. Joseph's Hospital	"	8,523	5,057	3,466
General Hospital	Kincardine	3,038	1,656	1,382
General Hospital	Kingston	47,956	22,065	25,801
Hotel Dieu Hospital	"	31,816	8,874	22,942
Kitchener and Waterloo Hospitals	Kitchener	12,389	11,320	1,069
Freeport Sanatorium	"	4,416		4,416
Ross Memorial Hospital	Lindsay	6,887	3,805	3,082
Listowel Memorial Hospital	Listowel	2,810	61	2,749
General Hospital	London	99,758	52,831	46,927
St. Joseph's Hospital	"	35,822	29,761	6,061
Bethesda Hospital	"	6,360		6,360
Victoria Home for Incurables	"	24,977		24,977
Queen Alexandria Sanatorium	"	25,521		25,521
General Hospital	Mattawa	4,804	60	4,744
General Hospital	Midland	4,215	1,763	2,452
Lady Minto Hospital	New Liskeard	2,920	2,758	162
Cottage Hospital	Niagara-on-the-Lake	1,788	51	1,737
General Hospital	Niagara Falls	7,387	2,646	4,741
Queen Victoria Hospital	North Bay	8,079	4,996	3,083
General Hospital	Orangeville	2,976		2,976
General Hospital	Orillia	9,239	3,465	5,774
General Hospital	Oshawa	10,735	5,175	5,560
General Protestant Hospital	Ottawa	50,952	29,735	21,217
Roman Catholic Hospital	"	61,220	31,207	30,013
Maternity Hospital	"	7,971	6,237	1,734
Misericordia Maternity Hospital	"	25,791	21,563	4,228
St. Luke's GeneralHospital	"	45,066	33,544	11,522
Perley Home for Incurables	"	20,706		20,706
Royal Sanatorium	"	20,661		20,661
General and Marine Hospital	Owen Sound	12,671	8,531	4,140
General Hospital	Parry Sound	3,768	2,274	1,494
St. Joseph's Hospital	"	3,658		3,658
Cottage Hospital	Pembroke	6,275	2,531	3,744
General Hospital	"	19,082	4,949	14,133
General Hospital	Penetanguishene	1,142		1,142
Nicholl's Hospital	Peterborough	15,254	8,324	6,930
St. Joseph's Hospital	"	10,980	5,030	5,950
C. E. Englehart Hospital	Petrolea	6,171	1,850	4,321
Prince Edward County Hospital	Picton	1,877		1,877
Railway, Marine and General Hospital	Port Arthur	10,260	4,641	5,619
St. Joseph's Hospital	"	14,793	5,092	9,701
General Hospital	Port Hope	4,545	35	4,510
Victoria General Hospital	Renfrew	6,757	3,006	3,751
General and Marine Hospital	St. Catharines	17,302	11,404	5,898
Consumptives Sanatorium	"	4,180		4,180
Amasa Wood Hospital	St. Thomas	10,562	4,800	5,762
General Hospital	Sarnia	9,835	6,932	2,903

TABLE III.—Showing the deductions which have to be made from the collective stay of patients for the protracted residence of incurables, lying-in cases, etc. For persons coming within these classes only seven cents per day is allowed.—*Concluded.*

Hospitals	Location	Collective days' stay, exclusive of infants under one year of age.	Deduct for incurables and lying-in cases for which only Refuge rate is allowed, also deduct the days stay of patients who paid over $10.50 per week	No. of days' stay for which hospital allowance is made.
Royal Victoria Hospital	Sault Ste. Marie	6,280		6,280
General Hospital	"	13,942	9,020	4,922
Public Hospital	Smith's Falls.	8,814	627	8,187
St. Francis' Hospital	"	8,613	4,988	3,645
General Hospital	Stratford.	11,137	6,810	4,327
General Hospital	Strathroy.	4,797	430	4,367
St. Joseph's Hospital	Sudbury.	27,930	6,264	21,666
General Hospital	Toronto.	206,572	72,079	134,493
Grace Hospital	"	36,290	14,430	21,860
Hospital for Sick Children	"	92,123	17,775	74,348
Orthopedic Hospital	"	7,225	5,449	1,776
St. John's Hospital	"	11,901	219	11,682
St. Michael's Hospital	"	83,047	24,654	58,393
Salvation Army Women's Hospital	"	14,823	3,159	11,664
Wellesley Hospital	"	28,707	28,482	225
Western Hospital	"	55,549	23,580	31,969
Women's College Hospital	"	12,772	2	12,770
Home for Incurable Children	"	10,712		10,712
Toronto Hospital for Incurables	"	81,029		81,029
The Preventorium	"	23,051		23,051
General Hospital	Walkerton.	3,536	2,673	863
General Hospital	Welland.	7,824	3,043	4,781
Toronto Free Hospital for Consumptives	Weston	110,676		110,676
King Edward Sanatorium	"			
Queen Mary Hospital for Children	"			
Grace Hospital	Windsor.	7,015	185	6,830
Hotel Dieu Hospital	"	22,507	16,812	5,695
General Hospital	Wingham.	23,19	2,111	208
General Hospital	Woodstock.	11,518	8,207	3,311
Totals for 1921		2,279191	810,102	1,469,089
Totals for 1920		22,955,41	921,869	1,373,672

TABLE IV.—Relative to income of Hospitals.

Hospitals.	Location.	Amount received from municipalities as a grant and for patients' maintenance.	Amount received from patients for board.	Amount received as income from property or investments belonging to hospital.	Subscriptions and donations of private individuals and incidental receipts.	Total receipts from all sources other than the Government grant.
Rosamond Memorial Hospital	Almonte	$655 00	$5,574 70	$620 13	$3,161 58	$10,011 41
General Hospital	Barrie	850 00	24,915 25	697 72	75 97	26,538 94
General Hospital	Belleville	6,225 00	39,808 62	80 00	6,439 94	52,553 56
General Hospital	Bowmanville	1,350 00	11,715 56	.....	3,133 85	16,199 41
General Hospital	Brantford	41,770 91	52,925 01	.....	1,013 91	95,709 83
Brant Sanatorium	"	12,807 05	2,633 50	.....	1,526 25	16,966 80
General Hospital	Brockville	2,000 00	38,460 38	1,545 55	2,178 88	44,184 81
St. Vincent de Paul Hospital	"	2,070 17	29,469 07	.....	18,574 38	50,113 62
General Hospital	Chatham	1,206 50	41,502 84	55 00	1,129 80	43,894 14
St Joseph's Hospital	"	1,629 85	26,213 30	.....	6,689 37	34,532 42
Lady Minto Hospital	Chapleau	300 00	5,287 10	.....	4,058 51	9,645 61
Clinton Public Hospital	Clinton	1,000 00	5,061 44	114 11	1,349 57	7,525 12
Cottage Hospital	Cobourg	1,585 00	12,316 69	.....	557 43	14,459 12
Lady Minto Hospital	Cochrane	602 39	10,644 87	.....	4,395 03	15,642 29
General and Marine Hospital	Collingwood	1,975 00	21,443 25	.....	325 01	23,743 26
General Hospital	Cornwall	2,500 00	20,235 40	2,421 22	11,598 12	36,754 74
Hotel Dieu Hospital	"	2,500 00	16,439 89	.....	8,888 77	27,828 66
Haldimand Co. Mem. Hospital	Dunnville	1,000 00	8,638 53	.....	3,680 65	13,319 18
Royal Alexandra Hospital	Fergus	1,695 00	15,293 81	.....	686 97	17,675 78
McKellar General Hospital	Fort William	28,749 71	75,803 77	.....	1,040 78	105,594 26
General Hospital	Galt	9,600 00	30,371 97	473 00	3,111 05	43,556 02
General and Marine Hospital	Goderich	1,100 00	5,222 47	98 70	325 30	6,746 47
Muskoka Cottage Sanatorium	Gravenhurst	.....	64,354 63	3,447 09	49,883 45	117,685 17
Muskoka Free Hosp. for Consump.	"	60,890 22	20,599 08	13,839 31	76,684 93	172,013 54
General Hospital	Guelph	4,141 25	59,361 67	.....	3,145 53	66,648 45
St. Joseph's Hospital	"	4,549 25	23,395 43	.....	550 86	28,495 54
Providence Hospital	Haileybury	1,090 70	37,809 08	.....	5,177 92	44,077 70
City Hospital	Hamilton	221,298 17	170,556 02	.....	.....	391,854 19
St. Joseph's Hospital	"	4,469 00	85,686 13	.....	1,185 11	91,340 24
Mountain Sanatorium	"	49,835 02	19,527 09	261 71	.....	69,623 82
General Hospital	Ingersoll	1,800 00	8,330 60	544 23	1,317 24	11,992 07
General Hospital	Kenora	2,000 00	9,872 65	.....	1,414 00	13,286 65
St. Joseph's Hospital	"	368 00	7,414 83	824 42	1,411 77	10,019 02
General Hospital	Kincardine	.....	6,000 53	37 63	602 24	6,640 40
General Hospital	Kingston	21,390 00	91,395 09	58 67	7,101 68	119,945 44
Hotel Dieu Hospital	"	7,210 00	46,046 83	.....	13,665 33	66,922 16
Kitchener and Waterloo Hospital	Kitchener	7,582 26	38,412 51	209 00	1,674 42	47,878 19
Freeport Sanatorium	"	2,443 75	2,908 50	.....	13,236 93	18,589 18
Ross Memorial Hospital	Lindsay	1,700 00	16,117 75	2,378 55	3,890 05	24,086 35
Listowel Memorial Hospital	Listowel	1,600 00	8,394 10	.....	1,584 74	11,578 84
General Hospital	London	139,507 14	172,116 70	526 71	11,055 84	323,206 39
St. Joseph's Hospital	"	575 50	109,869 15	.....	.....	110,444 65
Bethesda Hospital	"	500 00	24,222 76	.....	14,053 93	38,776 69
Victoria Home for Incurables	"	4,173 85	16,471 27	449 89	2,307 56	23,402 57
Queen Alexandra Sanatorium	"	27,335 60	16,311 57	2,381 12	183,000 78	229,029 07
General Hospital	Mattawa	329 00	5,996 53	474 73	889 26	7,689 52
General Hospital	Midland	800 00	11,013 29	.....	1,756 75	13,570 04
Lady Minto Hospital	New Liskeard	355 00	9,225 78	.....	4,064 38	13,645 16
Cottage Hospital	Nia.-on-the-L	.....	5,388 75	.....	642 50	6,031 25
General Hospital	Niagara Falls	5,000 00	24,336 28	.....	586 74	29,923 02
Queen Victoria Hospital	North Bay	2,473 50	18,317 18	.....	3,897 20	24,687 88
General Hospital	Orangeville	.....	7,771 79	.....	192 90	7,964 69
General Hospital	Orillia	1,500 00	16,985 67	264 00	265 38	19,015 05
General Hospital	Oshawa	2,338 75	29,235 46	.....	993 50	32,567 71
General Protestant Hospital	Ottawa	23,872 70	128,154 41	.....	6,777 67	158,804 78
Roman Catholic Hospital	"	32,021 50	100,605 40	2,065 75	33,464 13	168,156 78
Maternity Hospital	"	2,500 00	31,832 99	.....	148 75	34,481 74
Misericordia Maternity Hospital	"	3,800 00	7,700 84	765 00	16,880 86	29,146 70
St. Luke's General Hospital	"	10,896 50	130,150 03	368 06	1,471 65	142,886 24
Perley Home for Incurables	"	3,000 00	6,473 32	1,673 27	1,045 00	12,191 59
Royal Sanatorium	"	37,457 40	2,793 05	.....	58 78	40,309 23
General and Marine Hospital	Owen Sound	3,050 00	27,851 82	88 00	3,058 05	34,047 87
General Hospital	Parry Sound	.....	10,171 23	.....	379 94	10,551 17
St. Joseph's Hospital	"	.....	8,455 79	.....	120 00	8,575 79
Cottage Hospital	Pembroke	1,686 06	12,686 38	325 00	1,445 95	16,143 39
General Hospital	"	5,282 92	20,055 51	253 00	136 10	25,727 53
General Hospital	Penetanguishene	1,000 00	2,755 71	.....	1,535 30	5,291 01
Nicholl's Hospital	Peterborough	8,550 00	39,974 65	12,013 81	177 50	60,715 96
St. Joseph's Hospital	"	797 75	22,863 46	.....	.....	23,661 21
C. E. Englehart Hospital	Petrolea	2,500 00	10,578 08	1,460 01	2,455 24	16,993 33
Prince Edward County Hospital	Picton	2,000 00	7,368 71	.....	12,493 50	21,862 21
Ry., Marine and General Hospital	Port Arthur	5,809 99	24,729 84	.....	2,109 54	32,649 37
St. Joseph's Hospital	"	4,566 92	31,698 65	475 00	4,131 65	40,872 22
General Hospital	Port Hope	750 00	11,257 77	776 47	1,364 33	14,148 57
Victoria General Hospital	Renfrew	7,101 02	14,044 34	.....	576 20	21,721 56
General and Marine Hospital	St. Catharines	9,795 50	40,129 80	551 23	4,855 56	55,332 09
Consumptive Sanatorium	"	4,278 50	1,211 50	62 80	1,263 84	6,816 64
Amasa Wood Hospital	St. Thomas	8,500 00	30,795 16	.....	282 22	39,577 38
General Hospital	Sarnia	7,500 00	29,261 74	535 10	.....	37,296 84
Royal Victoria Hospital	S. Ste. Marie	332 25	14,029 35	.....	4,214 77	18,576 37

TABLE IV.—Relative to income of Hospitals.—*Concluded.*

Hospitals.	Location.	Amount received from municipalities as a grant and for patients' maintenance.	Amount received from patients for board.	Amount received as income from property or investments belonging to hospital.	Subscriptions and donations of private individuals and incidental receipts.	Total receipts from all sources other than the Government Grant
General Hospital	S. Ste. Mrrie	675 15	35,259 66		2,566 97	38,501 78
Public Hospital	Smith's Falls	1,650 00	22,258 23	1,596 43	4,216 04	29,720 70
St. Francis' Hospital	"	900 00	17,710 97		3,268 88	21,879 85
General Hospital	Stratford	5,860 00	36,507 05	70 73	4,632 15	47,069 93
General Hospital	Strathroy	1,605 50	14,538 53		323 50	16,467 53
St. Joseph's Hospital	Sudbury	1,323 00	58,079 81		5,124 47	64,527 28
General Hospital	Toronto	135,477 95	610,002 63	75,528 64	24,741 64	845,750 86
Grace Hospital	"	32,983 01	101,459 39	2,715 21	6,711 20	143,868 81
Hospital for Sick Children	"	95,119 59	73,972 33	1,166 04	26,097 37	196,355 33
Orthopedic Hospital	"		22,273 67	79 25	4,025 70	26,378 62
St. John's Hospital	"	6,163 25	55,781 40	249 11	3,461 27	65,655 03
St. Michael's Hospital	"	69,611 35	142,154 65		1,662 24	213,428 24
Salvation Army Women's Hosp	"		17,488 48		2,269 55	19,758 03
Wellesley Hospital	"	92 50	207,731 07			207,823 57
Western Hospital	"	51,461 65	128,269 99		15,835 61	195,567 25
Women's College Hospital	"	3,874 34	37,209 23		3,534 99	44,618 56
Home for Incurable Children	"	2,376 80	1,579 40	2,638 26	16,818 30	23,412 76
Toronto Hospital for Incurables	"	91,229 50	24,523 77	4,226 34	9,442 55	129,422 16
The Preventorium	"	18,734 60			932 55	19,667 15
General Hospital	Walkerton	2,710 00	9,160 13		1,098 53	12,968 66
General Hospital	Welland	4,000 00	17,930 25		9,869 26	31,619 51
Toronto Free Hosp. for Consump. King Edward Sanatorium Queen Mary Hosp. for Children	Weston	144,587 32	11,736 43	5,771 97	52,464 52	214,560 24
Grace Hospital	Windsor		26,271 82		7,086 90	33,358 72
Hotel Dieu Hospital	"	2,795 25	47,075 28		20,871 53	70,742 06
General Hospital	Wingham	1,300 00	8,163 13		202 93	9,666 06
General Hospital	Woodstock	4,522 07	28,490 75	1,236 69	130 00	34,379 51
Totals for 1921		1,566,529 38	4,206,679 70	148,503 66	817,825 22	6,739,537 96
Totals for 1920		1,385,910 71	3,847,191 66	146,597 64	912,334 44	6,292,034 45

TABLE V.—Showing the basis

Hospitals	Location	Collective days' stay upon which Hospital grants are based	Amount of grant for proper Hospital cases
Rosamond Memorial Hospital	Almonte	1,293	$ 646 50
General Hospital	Barrie	10,432	5,216 00
General Hospital	Belleville	3,438	1,719 00
General Hospital	Bowmanville	4,060	2,030 00
General Hospital	Brantford	26,261	13,130 50
General Hospital	Brockville	6,867	3,433 50
St. Vincent de Paul Hospital	"	5,566	2,783 00
General Hospital	Chatham	177	88 50
St. Joseph's Hospital	"	4,110	2,055 00
Lady Minto Hospital	Chapleau	2,751	1,375 50
Clinton Public Hospital	Clinton	1,467	733 50
Cottage Hospital	Cobourg	3,618	1,809 00
Lady Minto Hospital	Cochrane	4,617	2,308 50
General Marine Hospital	Collingwood	4,317	2,158 50
General Hospital	Cornwall	3,973	1,986 50
Hotel Dieu Hospital	"	11,752	5,876 00
Haldimand Co. Memorial Hospital	Dunnville	2,412	1,206 00
Royal Alexandria Hospital	Fergus	1,750	875 00
McKellar General Hospital	Fort William	13,326	6,663 00
General Hospital	Galt	5,878	2,939 00
General and Marine Hospital	Goderich	1,482	741 00
General Hospital	Guelph	11,144	5,572 00
St. Joseph's Hospital	"	10,146	5,073 00
Providence Hospital	Haileybury	9,808	4,904 00
City Hospital	Hamilton	90,547	45,273 50
St. Joseph's Hospital	"	16,105	8,052 50
General Hospital	Ingersoll	840	420 00
General Hospital	Kenora	1,990	995 00
St. Joseph's Hospital	"	3,466	1,733 00
General Hospital	Kincardine	1,382	691 00
General Hospital	Kingston	25,891	12,945 50
Hotel Dieu Hospital	"	22,942	11,471 00
Kitchener and Waterloo Hospital	Kitchener	1,069	534 50
Ross Memorial Hospital	Lindsay	3,082	1,541 00
Listowel Memorial Hospital	Listowel	2,749	1,374 50
General Hospital	London	46,927	23,463 50
St. Joseph's Hospital	"	6,061	3,030 50
Bethesda Hospital	"	6,360	3,180 00
Home for Incurables	"	24,977	12,488 50
General Hospital	Mattawa	4,744	2,372 00
General Hospital	Midland	2,452	1,226 00
Lady Minto Hospital	New Liskeard	162	81 00
Cottage Hospital	Niagara-on-the-Lake	1,737	868 50
General Hospital	Niagara Falls	4,741	2,370 50
Queen Victoria Hospital	North Bay	3,083	1,541 50
General Hospital	Orangeville	2,976	1,488 00
General Hospital	Orillia	5,774	2,887 00
General Hospital	Oshawa	5,560	2,780 00
General Protestant Hospital	Ottawa	21,217	10,608 50
Roman Catholic Hospital	"	30,013	15,006 50
Maternity Hospital	"	1,734	867 00
Misericordia Maternity Hospital	"	4,228	2,114 00
St. Luke's General Hospital	"	11,522	5,761 00
Perley Home for Incurables	"	20,706	10,353 00
General and Marine Hospital	Owen Sound	4,140	2,070 00
General Hospital	Parry Sound	1,494	747 00
St. Joseph's Hospital	"	3,658	1,829 00
Cottage Hospital	Pembroke	3,744	1,872 00
General Hospital	"	14,133	7,066 50
		552,851	276,425 50

on which statutory aid is granted.

Collective days' stay upon which computation of Refuge rate is based	Computation of 10 cents per day being Refuge rate for cases for Hospital treatment over time allowance	Days at $1.50	$ c.	Amount payable to each Hospital from appropriation by the Legislature of 1921
50	$ 5 00			$ 651 50
4,856	485 60			5,701 60
				1,719 00
113	11 30			2,041 30
1,915	191 50			13,322 00
27	2 70			3,436 20
854	85 40			2,868 40
				88 50
761	76 10			2,131 10
18	1 80	251	376 50	1,753 80
97	9 70			743 20
				1,809 00
115	11 50	899	1,348 50	3,668 50
231	23 10			2,181 60
156	15 60			2,002 10
422	42 20			5,918 20
38	3 80			12,098 00
250	25 00			900 00
2,547	254 70	2,038	3,057 00	9,974 70
59	5 90			2,944 90
105	10 50			751 50
13	1 30			5,573 30
59	5 90			5,078 90
5	50	1,047	1,570 50	6,475 00
6,443	644 30			45,917 80
511	51 10			8,103 60
				420 00
223	22 30			1,017 30
3,919	391 90	120	180 00	2,304 90
21	2 10			693 10
2,245	224 50			13,170 00
370	37 00			11,508 00
				534 50
				1,541 00
61	6 10			1,380 60
20,229	2,022 90			25,486 40
2,214	221 40			3,251 90
				3,180 00
				12,488 50
60	6 00	229	343 50	2,721 50
				1,226 00
		246	369 00	450 00
51	5 10			873 60
				2,370 50
		1,358	2,037 00	3,578 50
				1,488 00
610	61 00			2,948 00
101	10 10			2,790 10
1,907	190 70			10,799 20
838	83 80			15,090 30
				867 00
17,830	1,783 00			3,897 00
3,214	321 40			6,082 40
				10,353 00
243	24 30			2,094 30
563	56 30	462	693 00	1,496 30
		41	61 50	1,890 50
				1,872 00
442	44 20			7,110 70
74,786	7,478 60	6,691	10,036 50	293,940 60

TABLE V.—Showing the basis on

Hospitals	Location	Collective days' stay upon which Hospital grants are based	Amount of grant for proper Hospital cases
General Hospital	Penetanguishene	1,142	571 00
Nicholl's Hospital	Peterborough	6,930	3,465 00
St. Joseph's Hospital	"	5,950	2,975 00
C. E. Englehart's Hospital	Petrolea	4,321	2,160 50
Prince Edward County Hospital	Picton	1,877	938 50
Railway, Marine and General Hospital	Port Arthur	5,619	2,809 50
St. Joseph's Hospital	"	9,701	4,850 00
General Hospital	Port Hope	4,510	2,255 00
Victoria General Hospital	Renfrew	3,751	1,875 50
General and Marine Hospital	St. Catharines	5,898	2,949 00
Amasa Wood Hospital	St. Thomas	5,762	2,881 00
General Hospital	Sarnia	2,903	1,451 50
Royal Victoria Hospital	Sault Ste. Marie	6,280	3,140 00
General Hospital	"	4,922	2,461 00
Public Hospital	Smith's Falls	8,187	4,093 50
St. Francis' Hospital	"	3,645	1,822 50
General Hospital	Stratford	4,327	2,163 50
General Hospital	Strathroy	4,367	2,183 50
St. Joseph's Hospital	Sudbury	21,666	10,833 00
General Hospital	Toronto	134,493	67,246 50
Grace Hospital	"	21,860	10,930 00
Hospital for Sick Children	"	74,348	37,174 00
Orthopedic Hospital	"	1,776	888 00
St. John's Hospital	"	11,682	5,841 00
St. Michael's Hospital	"	58,393	29,196 50
Salvation Army Women's Hospital	"	11,664	5,832 00
Wellesley Hospital	"	225	112 50
Western Hospital	"	31,969	15,984 50
Women's College Hospital	"	12,770	6,385 00
Home for Incurable Children	"	10,712	5,356 00
Toronto Hospital for Incurables	"	81,029	40,514 50
General Hospital	Walkerton	863	431 50
General Hospital	Welland	4,781	2,390 50
Grace Hospital	Windsor	6,830	3,415 00
Hotel Dieu Hospital	"	5,695	2,847 50
General Hospital	Wingham	208	104 00
General Hospital	Woodstock	3,311	1,655 50
Totals for 1921		1,137,218	568,609 00
Totals for 1920		1,041,403	365,139 70

		Collective days' stay of patients	Amount of Grant to each institution at the rate of 75 cents per day
Brant Sanatorium	Brantford	9,275	6,956 25
Muskoka Free Hospital for Consumptives	Gravenhurst	71,023	53,267 25
Mountain Sanatorium	Hamilton	63,068	47,301 00
Freeport Sanatorium	Kitchener	4,416	3,312 00
Queen Alexandra Sanatorium	London	25,521	19,140 75
Royal Sanatorium	Ottawa	20,661	15,493 75
Consumptive Sanatorium	St. Catharines	4,180	3,135 00
The Preventorium	Toronto	23,051	17,288 25
Toronto Free Hospital for Consumptives Queen Mary Hospital for Children	Weston	110,676	83,007 00
Totals for 1921		331,871	248,903 25
Totals for 1920		325,488	182,161 25

which statutory aid is granted.

Collective days' stay upon which computation of Refuge rate is based	Computation of 10 cents per day being Refuge rate for cases for Hospital treatment over time allowance	Days at $1.50	$ c.	Amount payable to each Hospital from appropriations by the Legislature of 1921
				571 00
37	3 70			3,468 70
				2,975 00
1,850	185 00			2,345 50
				938 50
244	24 40	613	919 50	3,753 40
426	42 60	371	556 50	5,449 60
35	3 50			2,258 50
				1,875 50
891	89 10			3,038 10
559	55 90			2,936 90
40	4 00			1,455 50
		151	226 50	3,366 50
303	30 30	542	813 00	3,304 30
627	62 70			4,156 20
30	3 00			1,825 50
49	4 90			2,168 40
430	43 00			2,226 50
832	83 20	1,025	1,537 50	12,453 70
10,984	1,098 40			68,344 90
766	76 60			11,006 60
12,536	1,253 60			38,427 60
21	2 10			890 10
219	21 90			5,862 90
4,177	417 70			29,614 20
3,159	315 90			6,147 90
				112 50
1,847	184 70			16,169 20
2	20			6,385 20
				5,356 00
				40,514 50
316	31 60			463 10
21	2 10			2,392 60
185	18 50			3,433 50
165	16 50			2,864 00
				104 00
1,118	111 80			1,767 30
116,655	11,665 50	9,393	14,089 50	594,364 00
168,295	12,505 35	9,572	12,323 75	389,968 80

TABLE VI.—Showing the cost of maintaining the Hospitals, also average daily cost per patient, etc.

Hospitals	Location	Collective days' stay, exclusive of infants under one year of age	Cost of dietaries	Salaries, fuel, light, medicine, bedding and all other expenditure on maintenance account	Total expenditure for maintenance	Average cost of each patient per day	Average cost of dietary of each patient per day
Rosamond Memorial Hospital	Almonte	2,333	$ 1,456 33	$ 8,952 76	10,409 09	4 46	.62
General Hospital	Barrie	20,689	7,586 04	23,107 31	30,693 35	1 48	37
General Hospital	Belleville	13,594	11,371 77	33,011 99	44,583 76	3 28	85
General Hospital	Bowmanville	4,173	3,626 85	14,516 14	18,142 99	4 35	87
General Hospital	Brantford	38,207	27,125 81	79,601 56	106,727 37	2 79	71
Brant Sanatorium	"	9,275	6,073 23	17,054 36	23,127 59	2 49	65
General Hospital	Brockville	16,163	14,464 02	27,305 71	41,769 73	2 58	89
St. Vincent de Paul Hospital	"	17,169	18,695 28	35,865 98	54,561 26	3 18	1 09
General Hospital	Chatham	11,504	14,628 80	31,545 25	46,174 05	4 01	1 27
St. Joseph's Hospital	"	13,410	11,771 93	24,018 89	35,790 82	2 67	88
Lady Minto Hospital	Chapleau	3,020	3,105 15	8,389 61	11,494 76	3 81	103
Clinton Public Hospital	Clinton	1,564	1,909 65	5,313 73	7,223 38	4 62	1 22
Cottage Hospital	Cobourg	3,618	3,350 23	9,966 14	13,316 37	3 68	93
Lady Minto Hoslpial	Cochrane	5,631	5,139 77	13,251 91	18,391 68	3 27	91
General and Marine Hospital	Collingwood	9,541	6,082 50	18,404 45	24,486 95	2 57	64
General Hospital	Cornwall	10,146	7,211 26	20,190 52	27,401 78	2 70	71
Hotel Dieu Hospital	"	15,367	13,799 79	17,783 56	31,583 35	2 06	90
Haldimand Co. Mem. Hospital	Dunnville	2,450	2,342 30	11,374 05	13,716 35	5 60	96
Royal Alexandra Hospital	Fergus	6,557	4,370 11	14,858 68	19,228 79	2 93	67
McKellar General Hospital	Fort William	29,725	26,152 11	79,145 24	105,297 35	3 60	89
General Hospital	Galt	14,023	14,637 25	30,924 75	45,562 00	3 25	1 04
General and Marine Hospital	Goderich	2,748	2,159 64	4,955 14	7,114 78	2 59	79
Muskoka Cottage Sanatorium	Gravenhurst	25,327	54,532 52	63,354 56	117,887 08	4 65	2 15
Muskoka Free Hosp. for Consump	"	71,023	69,480 31	181,664 76	251,145 07	3 53	98
General Hospital	Guelph	21,007	17,125 22	73,213 65	90,338 87	4 30	81
St. Joseph's Hospital	"	13,483	10,585 91	19,782 55	30,368 46	2 25	78
Providence Hospital	Haileybury	10,860	9,781 54	41,893 87	51,675 41	4 76	90
City Hospital	Hamilton	125,625	111,629 72	333,730 87	445,360 58	3 55	89
St. Joseph's Hospital	"	31,320	36,047 82	59,619 09	95,666 91	3 05	1 15
Mountain Sanatorium	"	63,068	41,943 39	85,545 34	127,488 73	2 02	67
General Hospital	Ingersoll	2,955	2,792 42	9,313 85	12,106 27	4 10	94
General Hospital	Kenora	3,227	3,131 17	11,647 31	13,778 48	4 27	66
St. Joseph's Hospital	"	8,643	4,980 50	6,023 38	11,003 88	1 27	58
General Hospital	Kincardine	3,038	1,316 74	6,990 68	8,307 42	2 73	43
General Hospital	Kingston	47,956	45,468 23	84,308 31	129,776 54	2 66	94
Hotel Dieu Hospital	"	31,816	30,254 45	47,150 02	77,404 47	2 43	91
Kitchener and Waterloo Hospital	Kitchener	12,389	16,155 33	41,376 15	57,531 48	4 64	1 30
Freeport Sanatorium	"	4,416	5,061 45	15,166 28	20,227 73	4 58	1 15
Ross Memorial Hospital	Lindsay	6,887	6,272 92	17,873 58	24,146 50	3 67	91
Listowel Memorial Hospital	Listowel	2,810	1,973 85	9,976 81	11,950 66	4 25	70
General Hospital	London	99,758	113,399 35	224,069 12	337,468 47	3 38	1 14
St. Joseph's Hospital	"	35,822	41,635 87	70,324 05	111,959 92	3 13	1 11
Bethesda Hospital	"	6,360	11,800 23	29,684 62	41,484 85	6 52	1 86
Victoria Home for Incurables	"	24,977	9,380 47	18,707 96	28,088 43	1 12	38
Queen Alexandra Sanatorium	"	152,409	83,407 15	167,174 72	250,581 87	1 64	55
General Hospital	Mattawa	5,033	2,856 81	7,281 59	10,138 40	2 01	57
General Hospital	Midland	4,215	2,026 13	11,990 15	13,926 28	3 30	48
Lady Minto Hospital	New Liskeard	3,166	3,662 35	11,075 21	14,737 56	4 65	1 16
Cottage Hospital	Nia.-on-the-L	1,788	1,457 22	4,271 19	5,728 41	3 20	81
General Hospital	Niagara Falls	7,387	9,229 52	20,501 87	29,731 39	4 02	1 25
Queen Victoria Hospital	North Bay	9,437	6,285 51	19,717 15	26,002 66	2 76	67
General Hospital	Orangeville	2,976	2,880 20	6,618 94	9,499 14	3 19	97
General Hospital	Orillia	9,239	6,261 90	11,681 34	17,943 24	1 94	68
General Hospital	Oshawa	10,735	8,592 90	35,049 92	43,642 82	4 06	80
General Protestant Hospital	Ottawa	50,952	45,653 97	118,178 30	163,832 28	3 22	90
Roman Catholic Hospital	"	61,220	42,743 21	132,040 74	174,783 95	2 85	70
Maternity Hospital, Ottawa	"	7,971	8,153 21	25,377 69	33,530 90	4 21	1 62
Misericordia Maternity Hospital	"	25,791	15,896 43	25,714 21	138,291 25	3 07	97
St. Luke's General Hospital	"	45,066	43,730 52	94,560 73	20,158 86	97	28
Perley Home for Incurables	"	20,706	5,890 46	14,268 40	55,950 48	2 71	56
Royal Sanatorium	"	20,661	11,628 79	44,321 69	33,818 96	2 67	95
General and Marine Hospital	Owen Sound	12,671	11,901 35	21,917 61	11,735 39	2 77	84
General Hospital	Parry Sound	4,230	3,533 08	8,202 31	10,383 28	2 81	92
St. Joseph's Hospital	"	3,699	3,417 14	6,966 14	16,803 00	2 68	72
Cottage Hospital	Pembroke	6,275	4,493 44	12,309 56	30,332 67	1 59	39
General Hospital	"	19,082	7,509 12	22,823 55	6,110 50	5 35	79
General Hospital	Penetanguishene	1,142	900 32	5,210 18	57,666 15	3 78	94
Nicholl's Hospital	Peterborough	15,254	14,299 65	43,366 50	24,292 75	2 21	56
St. Joseph's Hospital	"	10,980	6,106 81	18,185 94	18,537 55	3 00	60
C. E. Englehart Hospital	Petrolea	6,171	3,713 08	14,824 47	12,357 62	6 58	1 16
Prince Edward County Hospital	Picton	1,877	2,174 72	10,182 90	35,964 09	3 31	87
Ry., Marine and General Hospital	Port Arthur	10,873	9,454 32	26,509 77	45,878 56	3 03	91
St. Joseph's Hospital	"	15,164	13,785 85	32,092 71	16,539 12	3 64	70
General Hospital	Port Hope	4,545	3,193 90	13,345 22	20,124 24	2 98	89
Victoria General Hospital	Renfrew	6,757	6,012 55	14,111 69	56,567 93	3 27	1 17
General and Marine Hospital	St. Catharines	17,302	20,206 13	36,361 80	7,316 99	1 75	66
Consumptive Sanatorium	"	4,180	2,738 81	4,578 18	40,065 10	3 79	87
Amasa Wood Hospital	St. Thomas	10,562	9,164 29	30,900 81	43,195 94	4 60	1 00
General Hospital	Sarnia	9,835	9,862 64	33,333 30	18,360 69	2 85	78
Royal Victoria Hospital	S. Ste. Marie	6,431	5,038 59	13,322 10	18,360 69	2 85	78

TABLE VI.—Showing the cost of maintaining the Hospitals, also the average daily cost per patient, etc.—*Concluded.*

Hospitals	Location	Collective days' stay exclusive of infants under one year old	Cost of dietaries	Salaries, fuel, light, medicine, bedding and all other expenditure on maintenance account	Total expenditure for maintenance	Average cost of each patient per day	Average cost of dietary of each patient per day
General Hospital	S. Ste. Marie	14,484	10,980 55	25,847 38	36,827 93	2 54	75
Public Hospital	Smith's Falls	8,814	9,496 26	21,210 67	30,706 93	3 48	1 08
St. Francis' Hospital	"	8,633	9,423 26	13,972 95	23,396 21	2 71	1 09
General Hospital	Stratford	11,137	11,741 46	30,621 64	42,363 10	3 80	1 05
General Hospital	Strathroy	4,797	5,271 70	9,719 21	14,990 91	3 13	1 10
St. Joseph's Hospital	Sudbury	28,955	22,185 93	38,142 61	60,328 54	2 08	76
General Hospital	Toronto	206,572	222,204 31	769,866 15	992,070 46	4 80	1 07
Grace Hospital	"	36,290	36,660 36	137,590 61	174,250 97	4 80	1 01
Hospital for Sick Children	"	92,123	56,625 86	323,101 48	379,727 34	4 12	61
Orthopedic Hospital	"	7,225	8,112 10	25,243 45	33,355 55	4 62	1 12
St. John's Hospital	"	11,901	21,902 46	39,960 24	61,862 70	5 20	1 84
St. Michael's Hospital	"	83,047	82,634 33	198,964 35	281,598 68	3 39	99
Salvation Army Women's Hospital	"	14,823	4,325 18	12,557 34	16,882 52	1 14	29
Wellesley Hospital	"	28,707	63,083 84	139,164 86	202,248 70	7 05	2 19
Western Hospital	"	55,549	50,435 38	166,611 78	217,047 16	3 73	91
Women's College Hospital	"	12,772	11,184 28	39,016 26	50,200 54	3 93	88
Home for Incurable Children	"	10,712	4,156 02	26,793 19	30,949 21	2 90	39
Toronto Hospital for Incurables	"	81,029	50,166 32	126,296 17	176,462 49	2 18	62
The Preventorium	"	23,051	8,783 06	24,484 63	33,267 69	1 40	38
General Hospital	Walkerton	3,536	3,403 27	13,180 23	16,583 50	4 69	96
General Hospital	Welland	7,824	7,926 80	27,081 27	35,008 07	4 47	1 13
Toronto Free Hosp. for Consump.	Weston	110,676	88,464 46	234,626 58	323,091 04	2 92	80
King Edward Sanatorium							
Queen Mary Hospital for Children							
Grace Hospital	Windsor	7,015	8,130 25	25,018 00	33,148 25	4 73	1 16
Hotel Dieu Hospital	"	22,507	27,401 20	44,756 25	72,157 45	3 21	1 22
General Hospital	Wingham	2,319	1,975 31	7,192 03	9,167 34	3 95	85
General Hospital	Woodstock	11,518	11,998 81	22,724 09	34,722 90	3 01	1 04
Totals for 1921		2,415,472	2,127,534 06	5,642,976 53	7,770,510 59	3 22	88
Totals for 1920		2,367,420	2,291,730 72	4,779,780 71	7,071,511 43	2 99	97

TABLE VII.—Showing the proportion of maintenance of Hospitals paid by the Government.

Hospitals.	Location.	Revenues on maintenance account, exclusive of Government grant.	Government grant in aid of maintenance.	Total revenue for maintenance.	Total expenditure for maintenance.	Percentage of Government grant to total expenditure for maintenance
Rosamond Memorial Hospital	Alma	10,011 41	397 68	10,409 09	10,409 09	3 8
General Hospital	Barrie	26,538 94	5,993 03	32,531 97	30,693 35	19.5
General Hospital	Belleville	52,553 56	961 67	53,515 23	44,583 76	2.1
General Hospital	Bowmanville	16,199 41	1,347 23	17,546 64	18,142 99	7.4
General Hospital	Brantford	95,709 83	8,746 80	104,456 63	106,727 37	8.2
Brant Sanatorium	"	16,966 80	6,579 00	23,545 80	23,127 59	28.4
General Hospital	Brockville	44,184 81	2,401 85	46,586 66	41,769 73	5.8
St. Vincent de Paul Hospital	"	50,113 62	3,127 37	53,240 99	54,561 26	5.7
General Hospital	Chatham	43,894 14	598 54	44,492 68	46,174 05	1.3
St. Joseph's Hospital	"	34,532 42	1,061 01	35,593 43	35,790 82	2.9
Lady Minto Hospital	Chapleau	9,645 61	1,396 16	11,041 77	11,494 76	12.1
Clinton Public Hospital	Clinton	7,525 12	468 51	7,993 63	7,223 38	6.5
Cottage Hospital	Cobourg	14,459 12	1,305 29	15,764 41	13,316 37	9.8
Lady Minto Hospital	Cochrane	15,642 29	2,780 42	18,422 71	18,391 68	15.1
General and Marine Hospital	Collingwood	23,743 26	1,030 20	24,773 46	24,486 95	4.3
General Hospital	Cornwall	36,754 74	1,873 85	38,628 59	27,401 78	6.9
Hotel Dieu Hospital	"	27,828 66	3,617 27	31,445 93	31,583 35	11.5
Haldimand County Mem. Hosp.	Dunnville	133,19 18	502 60	13,821 78	13,716 35	3.7
Royal Alexandra Hospital	Fergus	17,675 78	557 04	18,232 82	19,228 79	2.9
McKellar General Hospital	Fort William	105,594 26	7,455 82	113,050 08	105,297 35	7.1
General Hospital	Galt	43,556 02	1,980 39	45,536 41	45,562 00	4.3
General and Marine Hospital	Goderich	6,746 47	208 84	6,955 31	7,114 78	2.9
Muskoka Cottage Sanatorium	Gravenhurst	117,685 17		117,685 17	117,887 08	
Muskoka Free Hosp. for Consump.	"	172,013 54	53,679 00	225,692 54	251,145 07	21.4
General Hospital	Guelph	66,648 45	4,738 28	71,386 73	90,338 87	5.2
St. Joseph's Hospital	"	28,495 54	2,287 06	30,782 60	30,368 46	7.5
Providence Hospital	Haileybury	44,077 70	4,378 30	48,465 00	51,675 41	8.5
City Hospital	Hamilton	391,854 19	26,941 80	418,795 99	445,360 58	6.0
St. Joseph's Hospital	"	91,340 24	5,504 64	96,844 88	95,666 91	5.8
Mountain Sanatorium	"	69,623 82	47,301 00	116,924 82	127,488 73	37.1
General Hospital	Ingersoll	11,992 07	1,183 70	13,175 77	12,106 27	9.8
General Hospital	Kenora	13,286 65	446 10	13,732 75	13,778 48	3.2
St. Joseph's Hospital	"	10,019 02	3,395 95	13,414 97	11,003 88	30.9
General Hospital	Kincardine	6,640 40	770 20	7,410 60	8,307 42	9.3
General Hospital	Kingston	119,945 44	8,738 11	128,683 55	129,776 54	6.8
Hotel Dieu Hospital	"	66,922 16	6,895 25	73,817 41	77,404 47	8.9
Kitchener and Waterloo Hospital	Kitchener	47,878 19	1,080 86	48,959 05	57,531 48	1.9
Freeport Sanatorium	"	18,589 18	3,306 75	21,895 93	20,227 73	16.3
Ross Memorial Hospital	Lindsay	24,086 35	1,183 40	25,269 75	24,146 50	4.7
Listowel Memorial Hospital	Listowel	11,578 84	556 76	12,135 60	11,950 66	4.7
General Hospital	London	323,206 39	14,262 08	337,468 47	337,468 47	4.2
St. Joseph's Hospital	"	110,444 65	1,699 12	112,143 77	111,959 92	1.5
Bethesda Hospital	"	38,776 69	2,955 36	41,732 05	41,484 85	7.1
Victoria Home for Incurables	"	23,402 57	9,775 50	33,178 07	28,088 43	34.8
Queen Alexandra Sanatorium	"	229,029 07	19,176 75	248,205 82	250,581 87	7.7
General Hospital	Mattawa	7,689 52	2,433 66	10,123 18	10,138 40	24.0
General Hospital	Midland	13,570 04	708 68	14,278 72	13,926 28	5.1
Lady Minto Hospital	New Liskeard	13,645 16	912 34	14,557 50	14,737 56	6.2
Cottage Hospital	Nai.on the Lake	6,031 25	436 56	6,467 81	5,728 41	7.6
General Hospital	Niagara Falls	29,923 02	1,718 59	31,641 61	29,731 39	5.1
Queen Victoria Hospital	North Bay	24,687 88	1,314 78	26,002 66	26,002 66	5.1
General Hospital	Orangeville	7,964 69	850 99	8,815 68	9,499 14	9.0
General Hospital	Orillia	19,015 05	1,818 85	20,833 90	17,943 24	10.1
General Hospital	Oshawa	32,567 71	3,769 74	36,337 45	43,642 82	8.6
General Protestant Hospital	Ottawa	158,804 78	5,455 09	164,259 87	163,822 27	3.3
Roman Catholic Hospital	"	168,156 78	10,756 40	178,913 18	174,783 95	6.2
Maternity Hospital	"	34,481 74	582 90	35,064 64	33,530 90	1.4
Misericordia Maternity Hospital	"	29,146 70	2,239 19	31,335 89	41,610 64	5.4
St. Luke's General Hospital	"	142,886 24	2,828 27	145,714 51	138,291 25	2.0
Perley Home for Incurables	"	12,191 59	8,219 00	20,410 59	20,158 86	40.8
Royal Sanatorium	"	40,309 23	15,641 25	55,950 48	55,950 48	28.0
General and Marine Hospital	Owen Sound	34,047 87	1,766 15	35,814 02	33,818 96	5.2
General Hospital	Parry Sound	10,551 17	1,184 22	11,735 39	11,735 39	10.1
St. Joseph's Hospital	"	8,575 79	1,801 63	10,377 42	10,383 28	17.4
Cottage Hospital	Pembroke	16,143 39	1,274 24	17,417 63	16,803 00	7.6
General Hospital	"	25,727 53	4,656 11	30,383 64	30,332 67	15.4
General Hospital	Penetanguishene	5,291 01	550 68	5,841 69	6,110 50	9.0
Nicholls Hospital	Peterborough	60,715 96	2,129 19	62,845 15	57,666 15	3.7
St. Joseph's Hospital	"	23,661 21	1,626 51	25,287 72	24,292 75	6.7
C. E. Englehart Hospital	Petrolia	16,993 33	1,644 22	18,637 55	18,537 55	8.9
Prince Edward Co. Hospital	Picton	21,862 21	712 37	22,574 58	12,357 62	5.8
Railway, Marine and General Hosp	Port Arthur	32,649 37	3,328 98	35,978 35	35,964 09	9.3
St. Joseph's Hospital	"	40,872 22	3,729 80	44,602 02	45,878 56	8.1
General Hospital	Port Hope	14,148 57	1,460 27	15,608 84	16,539 12	8,9
Victoria General Hospital	Renfrew	21,721 56	1,274 58	22,996 14	20,124 24	6.3
General and Marine Hospital	St. Catharines	55,332 09	1,235 84	56,567 93	56,567 93	2.2
Consumptive Sanatorium	"	6,816 64	2,487 75	9,304 39	7,316 99	34.1
Amasa Wood Hospital	St. Thomas	39,577 38	2,464 97	42,042 35	40,065 10	6.2
General Hospital	Sarnia	37,296 84	741 60	38,038 44	43,195 94	1.7
Royal Victoria Hospital	Sault Ste. Marie	18,576 37	1,328 99	19,905 36	18,360 69	7.2
General Hospital	"	38,501 78	3,369 06	41,870 84	36,827 93	9.2

TABLE VII.—Showing the proportion of maintenance of Hospitals paid by the Government.—*Concluded.*

Hospitals.	Location.	Revenues on maintenance account, exclusive of Government grant.	Government grant in aid of maintenance.	Total revenue for maintenance.	Total expenditure for maintenance	Percentage of Government grant to total expenditure for maintenance.
Public Hospital	Smith's Falls	29,720 70	2,437 96	32,158 66	30,706 93	7.9
St. Francis' Hospital	"	21,879 85	1,624 33	23,504 18	23,396 21	6.9
General Hospital	Stratford	47,069 93	1,214 69	48,284 62	42,363 10	2.9
General Hospital	Strathroy	16,467 53	1,431 99	17,899 52	14,990 91	9.6
St. Joseph's Hospital	Sudbury	64,527 28	10,108 67	74,635 95	60,328 54	16.6
General Hospital	Toronto	845,750 85	91,500 25	937,251 11	992,070 46	9.0
Grace Hospital	"	143,868 87	10,892 00	154,766 87	174,250 97	6.3
Hospital for Sick Children	"	196,355 33	42,608 53	238,963 86	379,727 34	11.2
Orthopedic Hospital	"	26,378 62	734 16	27,112 78	33,255 55	2.2
St. John's Hospital	"	65,655 03	4,092 93	69,747 96	61,862 70	6.8
St. Michael's Hospital	"	213,428 24	37,141 70	250,569 94	281,598 68	13.2
Salvation Army Women's Hospital	"	19,758 03	3,159 81	22,917 84	16,882 52	18.7
Wellesley Hospital	"	207,823 57	69 40	207,892 97	202,248 70	.....
Western Hospital	"	195,567 25	17,693 39	213,260 64	217,047 16	8.2
Women's College Hospital	"	44,618 56	3,973 71	48,592 27	50,200 54	7.9
Home for Incurable Children	"	23,412 76	5,340 50	28,753 26	30,949 21	17.3
Toronto Hospital for Incurables	"	129,422 16	40,169 50	169,591 66	176,462 49	22.8
The Preventorium	"	19,667 15	14,207 25	33,874 40	33,367 69	42.7
General Hospital	Walkerton	12,968 66	828 76	13,797 42	16,583 50	5.0
General Hospital	Welland	31,619 51	1,633 60	33,253 11	35,008 07	4.7
Toronto Free Hosp. for Consump.	Weston	214,560 24	78,963 00	293,523 24	323,091 04	24.4
King Edward Sanatorium	Weston					
Queen Mary Hospital for Children	Weston					
Grace Hospital	Windsor	33,358 72	.....	33,358 72	33,148 25	.....
Hotel Dieu Hospital	"	70,742 06	1,861 24	72,603 30	72,157 45	2.1
General Hospital	Wingham	9,666 06	90 27	9,756 33	9,167 34	1.0
General Hospital	Woodstock	34,379 51	644 07	35,023 58	34,722 90	1.9
Totals for 1921	.....	6,739,537 96	745,530 70	7,485,068 66	7,770,510 59	9.6
Totals for 1920	.....	6,292,034 45	490,555 77	6,782,590 22	7,071,511 43	6.9

TABLE VIII.—Showing the comparative cost per patient daily in the different Hospitals in periods of five years.

Hospitals.	Location.	1905	1910	1915	1920	1921
Victoria Hospital	Almonte		1 23	2 50	3 80	4 46
Royal Victoria Hospital	Barrie	93	1 14	1 31	1 31	1 48
General Hospital	Belleville	1 63	1 09	1 21	2 47	3 28
General Hospital	Bowmanville			1 73	3 64	4 35
General Hospital	Brantford	78	1 19	1 75	2 84	2 79
Brant Sanatorium	"			1 90	2 54	2 49
General Hospital	Brockville	1 39	1 12	1 47	2 49	2 58
St. Vincent de Paul Hospital	"	87	1 16	1 48	2 16	3 18
Lady Minto Hospital	Chapleau			2 67	2 17	3 81
General Hospital	Chatham	87	1 00	1 61	2 81	4 01
St. Joseph's Hospital	"	72	82	1 52	2 71	2 67
General Hospital	Clinton				3 85	4 62
Cottage Hospital	Cobourg		1 66	1 73	3 33	3 68
Lady Minto Hospital	Cochrane				2 51	3 27
General and Marine Hospital	Collingwood	96	1 01	1 34	2 09	2 57
General Hospital	Cornwall	74	92	1 13	2 13	2 70
Hotel Dieu Hospital	"	53	75	96	2 08	2 06
Haldimand County Memorial Hospital	Dunnville				5 65	5 60
Royal Alexandra Hospital	Fergus		1 52	2 16	2 32	2 93
McKellar General Hospital	Fort William	1 08	1 66	1 90	3 02	3 60
General Hospital	Galt	1 12	1 55	1 49	2 27	3 25
General and Marine Hospital	Goderich		1 73	2 05	3 54	2 59
Muskoka Cottage Sanatorium	Gravenhurst	2 05	1 89	4 74	5 22	4 65
Muskoka Free Hospital for Consumptives	"		1 14	1 62	2 91	3 53
General Hospital	Guelph	1 16	95	1 43	3 78	4 30
St. Joseph's Hospital	"	84	1 03	1 11	2 39	2 25
City Hospital	Hamilton	1 14	1 37	1 53	3 38	3 53
St. Joseph's Hospital	"	78	1 02	1 24	2 48	3 05
Mountain Sanatorium	"		99	1 07	1 71	2 02
Providence Hospital	Haileybury			1 97	3 23	4 76
General Hospital	Ingersoll		2 19	1 74	3 02	4 10
General Hospital	Kenora	1 46	2 16	1 16	2 27	4 28
St. Joseph's Hospital	"	2 26	1 19	1 43	1 30	1 27
General Hospital	Kincardine		2 35	3 83	2 97	2 73
General Hospital	Kingston	79	96	1 41	2 11	2 66
Hotel Dieu Hospital	"	55	65	1 03	2 33	2 43
Essex Health Association	Kingsville			1 29	2 98	
Kitchener and Waterloo Hospital	Kitchener	1 64	1 64	1 53	2 99	4 64
Freeport Sanatorium	"					4 58
General Hospital	London	1 26	1 62	2 18	3 53	3 38
St. Joseph's Hospital	"	1 23	1 24	1 66	2 82	3 13
Queen Alexandra Sanatorium	"		2 11	1 10	2 59	1 64
Victoria Home for Incurables	"				1 09	1 12
Bethesda Hospital	"				3 73	6 52
Ross Memorial Hospital	Lindsay	1 89	1 52	1 94	2 82	3 67
Listowel Memorial Hospital	Listowel				3 87	4 25
General Hospital	Mattawa	96	91	61	1 10	2 01
General Hospital	Midland	2 10	1 74	1 56	2 93	3 30
Lady Minto Hospital	New Liskeard		1 29	1 59	2 16	4 65
General Hospital	Niagara Falls		1 54	2 01	3 32	4 02
Cottage Hospital	Nia.-on the Lake					3 20
Queen Victoria Hospital	North Bay	1 33	1 07	1 80	2 98	2 76
General Hospital	Orangeville			2 00	2 94	3 19
General Hospital	Orillia		1 12	1 40	1 91	1 94
General Hospital	Oshawa		8 23	1 46	2 39	4 06
General Protestant Hospital	Ottawa	1 29	1 28	1 76	3 14	3 22
Roman Catholic Hospital	"	81	1 02	1 04	2 21	2 85
Maternity Hospital	"	2 03	1 97	2 24	3 68	4 21
Misericordia Maternity Hospital	"				1 35	1 61
Perley Home for Incurables	"				1 09	97
Royal Sanatorium	"		1 84	1 49	2 41	2 71
St. Luke's General Hospital	"	87	1 62	1 73	2 77	3 07
General and Marine Hospital	Owen Sound	89	1 11	1 87	1 92	2 67
General Hospital	Parry Sound		1 61	1 58	2 34	2 77
St. Joseph's Hospital	"				1 69	2 81
General Hospital	Pembroke	53	69	97	1 48	2 68
The Cottage Hospital	"	97	1 12	2 00	2 80	1 59
General Hospital	Penetanguishene			2 47	4 29	5 35
Nicholl's Hospital	Peterborough	195	1 73	1 90	3 17	3 78
St. Joseph's Hospital	"	47	94	1 39	2 22	2 21
C. E. Englehart Hospital	Petrolia			2 25	3 16	3 00
Prince Edward County Hospital	Picton				4 39	6 58
Railway, Marine and General Hospital	Port Arthur		1 84	1 70	2 69	3 31
St. Joseph's Hospital	"	1 09	1 35	1 20	2 63	3 03
General Hospital	Port Hope			2 21	3 03	3 64
Victoria General Hospital	Renfrew	1 49	1 11	1 30	2 41	2 98
General and Marine Hospital	St. Catharines	1 08	1 30	1 44	3 32	3 27
Consumptive Sanatorium	"		1 14	96	3 14	1 75
Amasa Wood Hospital	St. Thomas	1 92	1 97	2 15	2 67	3 79
General Hospital	Sarnia	1 63	1 59	1 28	3 65	4 60
General Hospital	Sault Ste. Marie	90	1 14	1 81	1 74	2 85
Royal Victoria Hospital	"				4 98	2 54
Public Hospital	Smith's Falls			2 04	3 76	3 48
St. Francis' Hospital	"	78	72	1 37	2 41	2 71
General Hospital	Stratford	1 17	1 28	1 81	3 70	3 80

TABLE VIII.—Showing the comparative cost per patient daily in the different Hospitals in periods of five years.—*Concluded.*

Hospitals	Location	1905	1910	1915	1920	1921
General Hospital	Strathroy			1 77	4 45	3 13
St. Joseph's Hospital	Sudbury	1 08	1 06	1 23	2 13	2 08
General Hospital	Toronto	1 28	1 41	2 04	4 74	4 80
Grace Hospital	"	1 00	1 39	1 81	4 09	4 80
Hospital for Sick Children	"	1 25	1 53	2 26	4 22	4 12
Orthopedic Hospital	"	1 10	1 39	1 64	3 07	4 62
The Preventorium	"			75	1 52	1 40
St. John's Hospital	"				4 26	5 20
St. Michael's Hospital	"	90	1 00	1 60	2 56	3 39
Toronto Hospital for Incurables	"				1 95	2 18
Salvation Army Women's Hospital	"				1 28	1 14
Wellesley Hospital	"				6 80	7 05
Western Hospital	"	92	1 02	1 53	3 43	3 73
Women's College Hospital	"				3 62	3 93
Home for Incurable Children	"				1 71	2 90
General Hospital	Walkerton	2 66	2 27	1 58	1 74	4 69
General Hospital	Welland		1 82	1 27	3 23	4 47
Toronto Free Hospital for Consumptives	Weston	1 53	1 35	1 64	2 94	2 92
King Edward Sanatorium	"		1 47			
Queen Mary Hospital for Children	"					
Hotel Dieu Hospital	Windsor	76	1 04	1 76	2 46	3 21
Grace Hospital	"					4 73
General Hospital	Wingham		1 79	2 28	4 26	3 95
General Hospital	Woodstock	1 87	1 34	1 42	3 47	3 01
Averages		1 13	1 26	1 64	2 94	3 22

SEPARATE REPORTS

VICTORIA HOSPITAL, ALMONTE

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	4
Admitted	180
Births in Hospital	44
Total number under treatment	228
Discharged	203
Died	11
Under treatment, 30th September, 1921	14
	228

Sex.

Male	86
Female	142
	228

Revenue.

From the Province of Ontario	$397 68
From the Town of Almonte	400 00
From the County of Lanark	100 00
From other municipalities	155 00
From endowments, investments, etc.	620 13
From patients themselves for maintenance and treatment	5,574 70
From subscriptions, donations and bequests from private individuals	3,152 88
From other sources	8 70
Total	$10,409 09

Expenditures.

Butchers' meat	$313 71
Butter and eggs	267 88
Flour, bread and meal	111 91
Milk	232 60
Tea and coffee	35 40
Potatoes and other vegetables	28 50
Groceries and provisions not enumerated	466 33
Drugs and medicines	355 11
Medical and surgical appliances	71 20
Beer, wine and spirits	
Bedding, napery and general house furnishings	200 55
Brooms, brushes, mops, soap and cleaning appliances	75 48
Fuel	710 22
Electric light, gas, oil and candles	144 57
Salaries and wages	4,366 45
Taxes, insurance and interest	142 50
Contingencies	160 06
Repairs, ordinary	556 60
Ice	65 80
Printing, stationery, etc.	68 96
Surgical instruments	
Bank overdraft	35 26
Refund of loan	2,000 00
Total	$10,409 09

Government grant for 1921 .... $651 50

ROYAL VICTORIA HOSPITAL, BARRIE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	38
Admitted	782
Births in Hospital	92
Total number under treatment	912
Discharged	852
Died	28
Under treatment, 30th September 1921	32
	912

Sex.

Male	345
Female	567
	912

Revenue.

From the Province of Ontario	$5,993 03
From the Town of Barrie	350 00
From the County of Simcoe	500 00
From other municipalities	
From patients for maintenance	24,915 25
From endowments, investments, etc.	697 72

ROYAL VICTORIA HOSPITAL, BARRIE.—*Continued.*

From subscriptions, donations and bequests from private individuals	$47 18
From other sources	28 79
Total	$32,531 97

Expenditures.

Butchers' meat	$1,751 97
Butter and eggs	1,734 18
Flour, bread and meal	837 55
Milk	1,095 47
Tea and coffee	
Potatoes and other vegetables	349 23
Groceries and provisions not enumerated	1,817 64
Drugs and medicines	1,707 46
Medical and surgical appliances	1,446 09
Beer, wine and spirits	98 69
Bedding, napery and general house furnishings	$1,305 53
Brooms, brushes, mops, soap and cleaning appliances	1,000 40
Fuel	5,199 51
Electric light, gas, oil and candles	625 21
Water	296 32
Ice supply	149 09
Salaries and wages	7,758 45
Electric power elevator	95 28
Contingencies	882 88
Repairs, ordinary	1,258 64
Taxes and insurance	322 93
X-Ray dept.	857 53
Clothing for patients	
Surgical instruments	91 48
Printing and postage	11 52
Total	$30,693 35
Government grant for 1921	$5,701 60

GENERAL HOSPITAL, BELLEVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	38
Admitted	1,263
Births in Hospital	147
Total number under treatment	1,448
Discharged	1,316
Died	79
Under treatment, 30th September, 1921	53
	1,448

Sex.

Male	582
Female	866
	1,448

Revenue.

From the Province of Ontario	$ 961 67
From the City of Belleville	4,500 00
From County of Hastings	1,725 00
From patients for maintenance and treatment	39,808 62
Income from endowments, investments, etc.	80 00
From subscriptions, donations and bequests from private individuals	6,439 94
From other sources	
Total	$53,515 23

Expenditures.

Butchers' meat	$2,765 38
Butter and eggs	1,918 92
Flour, bread and meal	1,062 54
Milk	2,018 49
Tea and coffee	440 05
Potatoes and other vegetables	559 97
Groceries and provisions not enumerated	2,806 42
Drugs and medicines	3,149 04
Medical and surgical appliances	2,034 70
Beer, wine and spirits	126 50
Bedding, napery and general house furnishings	887 72
Brooms, brushes, mops, soap and cleaning appliances	779 83
Fuel	4,566 87
Electric light, gas, oil and candles	1,325 66
Clothing for patients	
Ice supply	257 50
Salaries and wages	16,320 33
Contingencies	612 27
Repairs, ordinary	2,191 91
Stationery and printing	572 16
Taxes, insurance and interest	
Water supply	187 50
Total	$44,583 76
Government grant for 1921	$1,719 00

GENERAL HOSPITAL, BOWMANVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	12
Admitted	237
Births in Hospital	61
Total under treatment	310
Discharged	276
Died	18
Under treatment, 30th September, 1921	16
	310

Sex.

Male	105
Female	205
	310

Revenue.

From the Province of Ontario	$1,347 23
From Town of Bowmanville	500 00
From County of Durham	750 00
From patients for maintenance and treatment	11,715 56
From subscriptions, donations and bequests from private individuals	2,111 53
From all other sources	1,122 32
Total	$17,546 64

Expenditures.

Butchers' meat	$1,019 52
Butter and eggs	624 68
Flour, bread and meal	384 66
Milk	229 19
Tea and coffee	
Potatoes and other vegetables	
Groceries and provisions not enumerated	1,137 46
Drugs and medicines	2,019 95
Medical and surgical appliances	
Surgical instruments	
Beer, wine and spirits	120 75
Bedding, napery and general house furnishings	600 99
Brooms, brushes, mops, soap and cleaning appliances	108 86
Fuel	2,176 63
Light, gas, oil and candles	496 96
Ice supply	
Salaries and wages	5,186 10
Stationery, printing, postage, etc	84 80
Contingencies	2,898 81
Repairs, ordinary	862 21
Laundry	
Taxes and insurance	62 84
Hay and straw	18 35
Water supply	110 59
Total	$18,142 99
Government grant for 1921	$2,041 30

GENERAL HOSPITAL, BRANTFORD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	97
Admitted	2,378
Births in the Hospital	300
Total number under treatment	2,775
Discharged	2,527
Died	136
Under treatment, 30th September, 1921	112
	2,775

Sex.

Male	1,128
Female	1,647
	2,775

Revenue.

From the Province of Ontario	$8,746 80
From the City of Brantford	37,000 00
From the County of Brant	4,770 91
From other municipalities	
From patients for maintenance and treatment	52,925 01
Income from endowments, investments, etc	
From subscriptions, donations and bequests from private individuals	
From all other sources	1,013 91
Total	$104,456 63

Expenditures.

Butchers' meat	$6,610 23
Butter and eggs	5,543 01
Flour, bread and meal	2,673 96

GENERAL HOSPITAL, BRANTFORD.—*Continued.*

Milk	$3,853 79
Tea and coffee	1,220 48
Potatoes and other vegetables	2,162 84
Groceries and provisions not enumerated	5,061 50
Drugs and medicines	6,825 04
Medical and surgical appliances and surgical instruments	7,386 69
Beer, wine and spirits	942 76
Bedding, napery and general house furnishings	5,652 69
Brooms, brushes, mops, soap and cleaning appliances	1,803 04
Fuel and power	$10,302 26
Electric light, gas, oil, candles	866 95
Ice	
Salaries and wages	34,720 36
Taxes and insurance	300 08
Printing, stationery, etc.	490 59
Contingencies	5,011 58
Repairs, ordinary	5,043 29
Hay and straw	256 23
Coffins and funerals	
Total	$106,727 37
Government grant for 1921	$13,322 00

THE BROCKVILLE GENERAL HOSPITAL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	42
Number admitted	967
Births in Hospital	82
Total number under treatment	1,091
Discharged	990
Died	57
Under treatment, 30th September, 1921	44
	1,091

Sex.

Male	392
Female	699
	1,091

Revenue.

From the Province of Ontario	$2,401 85
From the Town of Brockville	2,000 00
From the Counties of Leeds and Grenville	
From other municipalities of the Province	
From paying patients	38,460 38
From property belonging to the Hospital	1,545 55
From subscriptions, bequests and donations from private individuals	1,378 88
From other sources not enumerated	800 00
Total	$46,586 66

Expenditures.

Butchers' meat	$3,099 60
Butter and eggs	3,529 38
Flour, bread and meal	1,203 19
Milk	1,441 05
Tea and coffee	643 51
Potatoes and other vegetables	1,790 10
Groceries and provisions not enumerated	2,757 19
Drugs and medicines	1,116 62
Medical and surgical appliances	1,705 46
Bedding, napery and general house furnishings	858 03
Brooms, brushes, mops, soap and cleaning appliances	499 06
Fuel	3,396 79
Electric light, gas, oil, candles	1,249 45
Water supply	
Ice supply	222 91
Salaries and wages	10,197 95
Taxes and insurance	147 03
Contingencies	3,025 85
Repairs, ordinary	2,286 17
Ambulance	117 00
Printing, stationery, etc.	72 95
Laundry expenses	2,340 71
Surgical instruments	69 73
Total	$41,769 73
Government grant for 1921	$3,436 20

ST. VINCENT DE PAUL HOSPITAL, BROCKVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	49
Admitted	1,018
Births in Hospital	89
Total number under treatment	1,156
Discharged	1,081
Died	29
Under treatment, 30th September, 1921	46
	1,156

Sex.

Male	341
Female	815
	1,156

Revenue.

From the Province of Ontario	$3,127 37
From the Town of Brockville	2,000 00
From other municipalities	70 17
From paying patients	29,469 07
From subscriptions, bequests and donations from private individuals	2,513 82
From other sources not enumerated	16,060 56
Total	$53,240 99

Expenditure.

Butchers' meat and fish	$5,967 95
Butter and eggs	3,249 82
Flour, bread and meal	1,293 66
Milk	2,372 20
Tea and coffee	1,705 77
Potatoes and other vegetables	857 43
Groceries and provisions not enumerated	3,248 45
Drugs and medicines	802 75
Medical and surgical appliances	780 02
Bedding, napery and general house furnishings	2,075 85
Brooms, brushes, mops, soap and cleaning appliances	1,019 66
Fuel	4,143 36
Electric light, gas, oil, candles	1,754 96
Water supply	31 35
Clothing for sisters, including boots and shoes	120 35
Ice supply	245 00
Salaries and wages	9,159 21
Taxes, insurance and interest	1,405 06
Contingencies	4,834 19
Repairs, ordinary	963 39
Printing, stationery, etc.	50 65
Beer, wine and spirits	440 60
Extra repairs	8,039 58
Total	$54,561 26
Government grant for 1921	$2,868 40

LADY MINTO HOSPITAL, CHAPLEAU.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	8
Admitted	287
Births in Hospital	31
Total number under treatment	326
Discharged	310
Died	8
Under treatment, 30th September, 1921	8
	326

Sex.

Male	222
Female	104
	326

Revenue.

From the Province of Ontario	$1,396 16
From the Town of Chapleau	300 00
From patients themselves for maintenance and treatment	5,287 10
From subscriptions, donations and bequests from private individuals	2,409 60
From other sources	1,648 91
Total	$11,041 77

Expenditures.

Butchers' meat and fish	$643 52
Butter and eggs	137 67
Milk	81 14
Tea and coffee	
Potatoes and other vegetables	80 00
Groceries and provisions not enumerated	1,809 19
Flour bread and meal	221 21

LADY MINTO HOSPITAL, CHAPLEAU.—*Continued.*

Drugs and medicines	$323 73
Surgical and medical appliances	.....
Beer, wine and spirits	42 92
Bedding, napery and general house furnishings	.....
Fuel	1,891 82
Brooms, brushes, mops, soap and cleaning appliances	.....
Electric light, gas, oil and power	118 20
Water supply	89 50
Ice	$.....
Salaries and wages	3,310 14
Taxes and insurance, telephone and power	.....
Stationery, printing, etc.	.....
Contingencies	837 54
Repairs, ordinary	565 83
Hay and straw	.....
Paid on capital acct. and interest	1,342 35
Total	$11,494 76
Government grant for 1921	$1,753 80

GENERAL HOSPITAL, CHATHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment 1st October, 1920	38
Admitted	1,149
Births in Hospital	73
Total number under treatment	1,260
Discharged	1,188
Died	32
Under treatment, 30th September, 1921	40
	1,260

Sex.

Male	409
Female	851
	1,260

Revenue.

From the Province of Ontario	$598 54
From the City of Chatham	71 75
From the County of Kent	.....
From other municipalities of the Province	1,134 75
From patients themselves for maintenance and treatment	41,502 84
From subscriptions, donations and bequests from private individuals	1,129 80
From all other sources	55 00
Total	$44,492 68

Expenditures.

Butchers' meat	$3,358 92
Butter and eggs	.....
Flour, bread and meal	961 67
Milk	2,054 84
Tea and coffee	.....
Potatoes and other vegetables	620 05
Groceries and provisions not enumerated	7,633 32
Drugs and medicines	740 64
Surgical instruments	1,543 48
Beer, wine and spirits	.....
Bedding, napery and general house furnishings	3,480 37
Brooms, brushes, mops, soap and cleaning appliances	.....
Fuel	3,481 93
Electric light, gas, oil, candles	797 70
Ice	231 25
Salaries and wages	16,011 99
Insurance and interest	.....
Contingencies	.....
Repairs, ordinary	2,725 79
Laundry	951 60
Water supply	.....
Operating room	395 91
Printing and postage	1,184 59
Total	$46,174 05
Government grant for 1921	$88 50

ST. JOSEPH'S HOSPITAL, CHATHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	43
Admitted	890
Births in Hospital	136
Total under treatment	1,069
Discharged	985
Died	43
Under treatment, 30th September, 1921	41
	1,069

Sex.

Male	396
Female	673
	1,069

Revenue.

From the Province of Ontario	$1,061 01
From the City of Chatham	865 15
From the County of Kent	293 35
From other Municipalities	471 25
From patients for maintenance and treatment	26,213 30
From subscription, donations and bequests from private individuals	234 90
From other sources	6,454 47
Total	$35,593 43

Expenditures.

Butchers' meat	$3,046 02
Butter and eggs	1,624 97
Flour, bread and meal	1,066 91
Milk	2,364 15
Tea and coffee	
Potatoes and other vegetables	1,001 52
Groceries and provisions not enumerated	2,668 36
Drugs and medicines	794 94
Medical and surgical appliances	1,485 48
Beer, wine and spirits	340 89
Bedding, napery and general house furnishings	3,459 62
Brooms, brushes, mops, soap and cleaning appliances	441 98
Fuel	2,862 06
Light: electric, gas, oil, candles	259 27
Ice supply	100 00
Salaries and wages	5,533 09
Taxes, insurance and interest	655 00
Contingencies	661 27
Repairs, ordinary	7,155 30
Advertising, printing and postage	269 99
Total	$35,790 82
Government grant for 1921	$2,131 10

PUBLIC HOSPITAL, CLINTON

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	4
Admitted	173
Births in Hospital	28
Total number under treatment	205
Discharged	201
Died	4
Under treatment, 30th September, 1921	0
	205

Sex.

Male	68
Female	137
	205

Revenue.

From the Province of Ontario	$468 51
From the Town of Clinton	
From the County of Huron	$1,000 00
From other municipalities	
From endowments, investments, etc.	114 11
From patients themselves for maintenance and treatment	5,061 44
From subscriptions, donations and bequests from private individuals	1,349 57
From other sources	
Total	$7,993 63

Expenditures.

Butchers' meat	$327 95
Butter and eggs	275 21
Flour, bread and meal	129 85
Milk	240 35
Tea and coffee	33 80
Potatoes and other vegetables	86 00
Groceries and provisions not enumerated	816 49
Drugs and medicines	512 60
Medical and surgical appliances	
Beer, wine and spirits	

PUBLIC HOSPITAL, CLINTON.—*Continued.*

Bedding, napery and general house furnishings	$179 30
Brooms, brushes, mops, soap and cleaning appliances	58 40
Fuel	973 32
Electric light, gas, oil and candles	
Salaries and wages	1,556 30
Taxes, insurance and interest	1,111 50
Contingencies	38 00
Repairs, ordinary	$90 20
Ice	47 20
Printing, stationery, etc.	28 73
Surgical instruments	
Laundry	364 57
Telephone	43 03
Equipment	310 58
Total	$7,223 38
Government grant for 1921	$743 20

COTTAGE HOSPITAL, COBOURG.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	12
Admitted	324
Births in Hospital	46
Total number under treatment	382
Discharged	347
Died	23
Under treatment, 30th September, 1921	12
	382

Sex.

Male	164
Female	218
	382

Revenue.

From the Province of Ontario	$1,305 29
From the Town of Cobourg	500 00
From the Counties of Northumberland and Durham	760 00
From other municipalities in the Province	325 00
From paying patients themselves	12,316 69
From endowments, investments, etc.	
From subscriptions, donations, etc.	$507 07
From other sources	50 36
Total	$15,764 41

Expenditures.

Butchers' meat and fish	$850 92
Butter and eggs	595 60
Flour, bread and meal	451 01
Milk	487 67
Tea and coffee	147 20
Potatoes and other vegetables	95 22
Groceries and provisions not enumerated	555 35
Drugs and medicines	334 44
Medical and surgical appliances	
Bedding, napery and general house furnishings	623 10
Brooms, brushes, mops, soap and cleaning appliances	241 11
Fuel	1,412 41
Water	167 26
Electric light, gas, oil	311 81
Salaries and wages	4,199 74
Contingencies	2,235 18
Repairs, ordinary	334 57
Printing, stationery, postage, etc.	221 88
Ice	
Insurance and taxes	41 40
Clothing for patients	10 50
Wine and spirits	
Total	$13,316 37
Government grant for 1921	$1,809 00

LADY MINTO HOSPITAL, COCHRANE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	18
Admitted	329
Births in Hospital	52
Total number under treatment	399
Discharged	358
Died	13
Under treatment, 30th September, 1921	28
	399

LADY MINTO HOSPITAL, COCHRANE.—*Continued.*

Sex.

Male	223
Female	176
	399

Revenue.

From the Province of Ontario	$2,780 42
From the Town of Cochrane	602 39
From patients themselves for maintenance and treatment	10,644 87
From property belonging to Hospital, endowments, etc	
From subscriptions, donations, and bequests from private individuals	4,395 03
From other sources	
Total	$18,422 71

Expenditures.

Butchers' meat	$483 60
Butter and eggs	657 00
Flour, bread and meal	667 90
Milk	913 36
Tea and coffee	146 00
Potatoes and other vegetables	75 00
Groceries and provisions not enumerated	$1,143 94
Drugs and medicines	924 82
Surgical instruments and appliances	
Beer, wine and spirits	
Bedding, napery and general house furnishings	42 51
Brooms, brushes, mops, soap and cleaning appliances	1,273 18
Fuel	2,545 20
Electric light, gas, oil, candles	289 18
Laundry	
Clothing for patients	
Ice	
Salaries and wages	6,805 00
Taxes and insurance	488 40
Hay and straw	
Contingencies	162 35
Printing, stationery, etc.	106 13
Repairs, ordinary	530 70
Telephone	52 45
Bank overdraft	1,052 97
Interest	31 99
Total	$18,391 68

Government grant for 1921 .... $3,668 50

GENERAL AND MARINE HOSPITAL, COLLINGWOOD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	28
Admitted	534
Number of births in the Institution during the year	29
Total number under treatment	591
Discharged	538
Died	25
Under treatment, 30th September, 1921	28
	591

Sex.

Male	230
Female	361
	591

Revenue.

Received from the Province of Ontario	$1,030 20
From the Town of Collingwood	1,475 00
From the County of Simcoe	500 00
From paying patients	21,443 25
Subscriptions, donations, etc.	76 02
From sources not enumerated	248 99
Total	$24,773 46

Expenditures.

Butchers' meat	$1,405 32
Butter and eggs	1,104 48
Flour, bread and meal	738 87
Milk	1,050 74
Tea and coffee	120 26
Potatoes and other vegetables	222 94
Groceries and provisions not enumerated	1,439 89
Drugs and medicines	1,179 69
Medical and surgical appliances	732 87
Beer, wine and spirits	
Bedding, napery and general house furnishings	1,109 03
Brooms, brushes, mops, etc.	561 57
Fuel	3,411 72
Electric light, gas, oil, candles	273 67
Water supply	90 11
Ice	270 00
Salaries and wages	6,838 75
Contingencies	528 28
Repairs, ordinary	1,470 62
Taxes and insurance	29 75
Extra additions	1,908 39
Total	$24,486 95

Government grant for 1921 .... $2,181 60

GENERAL HOSPITAL, CORNWALL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Total under treatment, 1st October, 1920	21
Admitted	619
Births in Hospital	60
Total number under treatment	700
Discharged	623
Died	34
Under treatment, 30th September, 1921	43
	700

Sex.

Male	300
Female	400
	700

Revenue.

From the Province of Ontario	$1,873 85
From the Town of Cornwall	1,000 00
From the Counties of Stormont, Dundas, and Glengarry	1,200 00
From other municipalities in the Province	300 00
From paying patients themselves	20,235 40
From subscriptions, donations, etc.	11,181 97
From other sources	416 15
Income from endowments	2,421 22
Total	$38,628 59

Expenditures.

Butchers' meat and fish	$1,705 39
Butter and eggs	1,569 50
Flour, bread and meal	558 66
Milk	960 28
Tea and coffee	213 72
Potatoes and other vegetables	406 95
Groceries and provisions not enumerated	1,796 76
Drugs and medicines	700 41
Medical and surgical appliances	2,244 68
Surgical instruments	
Beer, wine and spirits	10 00
Bedding, napery and general house furnishings	1,912 37
Brooms, brushes, mops, soap and cleaning appliances	212 72
Fuel	2,601 00
Electric light, gas, oil, candles	564 17
Salaries and wages	6,860 23
Laundry	1,944 70
Contingencies	107 35
Repairs, ordinary	2,289 60
Printing, stationery, postage, telephone, etc.	458 22
Ice	191 47
Insurance and interest	93 60
Hay and straw	
Clothing for patients	
Total	$27,401 78
Government grant for 1921	$2,002 10

HOTEL DIEU HOSPITAL, CORNWALL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	39
Admitted	1,120
Births in Hospital	92
Total number under treatment	1,251
Discharged	1,159
Died	50
Under treatment, 30th September, 1921	42
	1,251

Sex.

Male	509
Female	742
	1,251

Revenue.

From the Province of Ontario	$3,617 27
From the Town of Cornwall	1,000 00
From the Counties of Stormont, Dundas and Glengarry	1,500 00
From other municipalities in the Province	
From paying patients themselves	16,439 89
From subscriptions, donations, etc.	5,713 77
From other sources	3,175 00
Total	$31,445 93

Expenditures.

Butchers' meat and fish	$3,710 13
Butter and eggs	2,162 80
Flour, bread and meal	1,987 25
Milk	975 00

HOTEL DIEU HOSPITAL, CORNWALL.—*Continued.*

Tea and coffee	$898 25
Potatoes and other vegetables	777 23
Groceries and provisions not enumerated	3,289 13
Drugs and medicines	857 22
Medical and surgical appliances	1,002 01
Surgical instruments	
Beer, wine and spirits	19 00
Bedding, napery and general house furnishings	2,166 00
Brooms, brushes, mops, soap and cleaning appliances	507 00
Fuel	3,567 28
Electric light, gas, oil and candles	$840 64
Ice	105 93
Salaries and wages	2,420 00
Taxes and insurance and interest	1,765 71
Contingencies	1,898 24
Repairs, ordinary	2,430 78
Clothing for patients	
Hay and straw	
Printing and postage	203 75
Total	$31,583 35
Government grant for 1921	$5,918 20

HALDIMAND WAR MEMORIAL HOSPITAL, DUNNVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	15
Admitted	226
Births in Hospital	28
Total Number under treatment	269
Discharged	251
Died	16
Under treatment, 30th September, 1921	2
	269

Sex.

Male	82
Female	187
	269

Revenue.

From the Province of Ontario	$502 60
From the Town of Dunnville	500 00
From the County of Haldimand	500 00
From other municipalities	
From patients for maintenance	8,638 53
From endowments, investments, etc.	
From subscriptions, donations and bequests from private individuals	158 00
From other sources	3,522 65
Total	$13,821 78

Expenditures.

Butchers' meat	$585 08
Butter and eggs	344 79
Flour, bread and meal	193 33
Milk	284 89
Tea and coffee	119 15
Potatoes and other vegetables	328 62
Groceries and provisions not enumerated	486 44
Drugs and medicines	315 28
Medical and surgical appliances	632 70
Beer, wine and spirits	10 13
Bedding, napery and general house furnishings	92 01
Brooms, brushes, mops, soap and cleaning appliances	1,391 73
Fuel	306 35
Electric light, gas, oil and candles	101 19
Water	390 86
Ice supply	55 00
Salaries and wages	7,228 57
Contingencies	74 91
Repairs, ordinary	64 98
Taxes and insurance	128 99
Surgical instruments	31 05
Printing and ostagpe	57 95
Rent and telephones	492 35
Total	$13,716 35
Government grant for 1921	$1,209 80

ROYAL ALEXANDRA HOSPITAL, FERGUS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	17
Admitted	353
Births in Hospital	25
Total under treatment	395
Discharged	355
Died	23
Under treatment, 30th September, 1921	17
	395

Sex.

Male	160
Female	235
	395

Revenue.

From the Province of Ontario	$557 04
From the County of Wellington	1,670 00
From other municipalities	25 00
From patients for maintenance and treatment	15,293 81
From subscriptions, donations and bequests from private individuals	356 47
From all other sources	330 50
Total	$17,232 82

Expenditures.

Butchers' meat	$839 43
Butter and eggs	799 73
Flour, bread and meal	522 37
Milk	613 93
Tea and coffee	87 18
Potatoes and other vegetables	885 53
Groceries and provisions not enumerated	622 04
Drugs and medicines	612 99
Medical and surgical appliances	708 54
Surgical instruments	
Bedding, napery and general house furnishings	1,843 00
Brooms, brushes, mops, soap and cleaning appliances	81 33
Fuel	2,259 47
Electric light, gas, oil, candles	1,699 27
Ice supply	81 60
Salaries and wages	3,949 99
Water supply	40 92
Contingencies	115 59
Repairs, ordinary	1,311 74
Hay, straw and feed	140 36
Printing and stationery	384 10
Freight and express	383 39
Taxes and insurance	37 50
Telephone	152 62
Laundry	1,056 17
X Ray machine	
Total	$19,228 79
Government grant for 1921	$900 00

MCKELLAR GENERAL HOSPITAL, FORT WILLIAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	80
Admitted	2,835
Number of births in Hospital	228
Total number under treatment	3,143
Discharged	2,921
Died	108
Under treatment, 30th September, 1921	114
	3,143

Sex.

Male	1,565
Female	1,578
	3,143

Revenue.

From the Province of Ontario	$7,455 82
From the Town of Fort William	28,749 71
From other municipalities	
From paying patients	75,803 77
Subscriptions, donations, etc.	1,040 78
Other sources	
Deficit for year	
Total	$113,050 08

Expenditures.

Butchers' meat	$4,831 61
Flour, bread and meal	2,328 31
Milk	4,132 80
Butter and eggs	5,592 03
Tea and coffee	701 94
Potatoes and other vegetables	2,556 13
Groceries and provisions not enumerated	5,397 29
Fish	

MCKELLAR GENERAL HOSPITAL, FORT WILLIAM.—*Continued.*

Drugs and medicines		$3,432 77	Contingencies		$1,451 70
Medical and surgical appliances		5,563 02	Repairs, ordinary		2,937 60
Beer, wine and spirits		313 72	Taxes and interest		1,110 47
Bedding, napery and general house furnishings		.....	Water supply		587 10
Brooms, brushes, mops, soap and cleaning appliances and laundry		582 18	Electric light, gas, oil, etc.		372 40
Fuel		14,088 45	X-Ray supplies		2,123 92
Taxes, insurance, etc.		725 93	Ice		612 00
Printing, stationery, etc.		1,452 37	Debenture interest		8,675 00
Salaries and wages		34,936 33	Sundry expenses		792 28
			Total		$105,297 35
			Government grant for 1921		$9,974 70

GALT HOSPITAL, GALT.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	52
Admitted	1,061
Number of births in the Institution	218
Total number under treatment	1,331
Discharged	1,225
Died	66
Under treatment, 30th September, 1921	40
	1,331

Sex.

Male	551
Female	780
	1,331

Revenue.

From the Province of Ontario	$1,980 39
From the Town of Galt	6,000 00
From the County of Waterloo	3,500 00
From other municipalities	100 00
From paying patients themselves	30,371 97
Income from endowments, investments, etc.	473 00
From subscriptions, bequests and donations of private individuals	562 40
From other sources	2,548 65
Total	$45,536 41

Expenditures.

Butchers' meat	$2,584 64
Butter and eggs	1,676 12
Flour, bread and meal	1,127 33
Milk	2,025 82
Tea and coffee	504 85
Potatoes and other vegetables	1,096 56
Groceries and provisions not enumerated	5,424 78
Drugs and medicines	3,789 68
Medical and surgical appliances	.....
Beer, wine and spirits	197 15
Bedding, napery and general house furnishings	1,590 66
Brooms, brushes, mops, soap and cleaning appliances	720 66
Fuel	3,427 77
Electric light, gas, oil, candles	1,173 41
Water supply	242 50
Ice	138 55
Salaries and wages	9,984 65
Taxes and insurance	1,150 58
Contingencies	1,516 41
Repairs, ordinary	2,553 30
Printing, stationery, etc.	379 70
Repairs and additions	2,984 47
Hay and straw cultivating grounds	781 65
Bank overdraft	490 76
Total	$45,562 00
Government grant for 1921	$2,944 90

GENERAL AND MARINE HOSPITAL, GODERICH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	8
Admitted	185
Births in Hospital	36
Total number under treatment	229
Discharged	214
Died	8
Under treatment, 30th September, 1921	7
	229

Sex.

Male	88
Female	141
	229

Revenue.

From the Province of Ontario	$208 84
From the Town of Goderich	600 00
From the County of Huron	500 00
From other municipalities	
From patients themselves for maintenance and treatment	5,222 47
From endowments, investments, etc.	98 70
From subscriptions, donations and bequests from private individuals	179 80
From other sources	145 50
Total	$6,955 31

Expenditures.

Butchers' meat	$481 54
Butter and eggs	355 54
Flour, bread and meal	126 70
Milk	252 20
Tea and coffee	78 20
Potatoes and other vegetables	48 25
Groceries and provisions not enumerated	815 61
Drugs and medicines	503 88
Medical and surgical appliances	
Beer, wine and spirits	21 60
Surgical instruments	
Bedding, napery and general house furnishings	212 57
Brooms, brushes, mops, soap and cleaning appliances	
Fuel	341 98
Electric light, gas, oil, candles	85 98
Water supply	55 30
Salaries and wages	3,043 70
Printing, stationery, etc.	157 60
Insurance and rent	201 00
Ice supply	
Contingencies	107 54
Repairs, ordinary	245 59
Telephone	
Total	$7,114 78

Government grant for 1921 .... $751 50

GENERAL HOSPITAL, GUELPH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	66
Admitted	1,372
Births in Hospital	100
Total number under treatment	1,538
Discharged	1,421
Died	61
Under treatment 30th September, 1921	56
	1,538

Sex.

Male	686
Female	852
	1,538

Revenue.

Received from the Province of Ontario	$4,723 28
From the City of Guelph	3,719 75
From the County of Wellington	421 50
From other municipalities	
From paying patients	59,361 67
Subscriptions, donations, etc.	2,415 00
From other sources not enumerated	730 53
Total	$71,371 73

Expenditures.

Butchers' meat	$5,594 52
Butter and eggs	3,420 24
Flour, bread and meal	1,947 97

GENERAL HOSPITAL, GUELPH.—*Continued.*

Milk		$11 68	Surgical appliances		$1,890 56
Tea and coffee		717 49	Hay and straw		972 88
Potatoes and other vegetables		928 28	Ice		290 00
Groceries and provisions not enumerated		4,505 04	Salaries and wages		22,334 61
Drugs and medicines, surgical instruments and appliances		1,433 20	Taxes, insurance and interest		4,399 58
Beer, wine and spirits		60 00	Repairs, ordinary		4,523 86
Bedding, napery and general house furnishings		1,472 52	Contingencies		1,976 82
Brooms, brushes, mops, etc		2,220 02	Printing, stationery, etc		454 69
Fuel		10,244 44	Clothing for patients		
Electric light, gas, oil, candles		2,379 79	Bank overdraft, 1920		18,374 84
Water supply		185 84	Total		$90,338 87
			Government aid for 1921		$5,573 30

ST. JOSEPH'S HOSPITAL, GUELPH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	36
Admitted	863
Births in Hospital	101
Total number under treatment	1,000
Discharged	911
Died	52
Under treatment, 30th September, 1921	37
	1,000

Sex.

Male	372
Female	628
	1,000

Revenue.

From the Province of Ontario	$2,287 06
From the City of Guelph	2,178 00
From the County of Wellington	2,371 25
From other municipalities of the Province	
From paying patients	23,395 43
Subscriptions, donations, etc	550 86
Other sources	
Total	$30,782 60

Expenditures.

Butchers' meat and fish	$3,823 80
Butter and eggs	1,470 80
Flour, bread and meal	1,639 21
Milk	
Tea and coffee	467 19
Potatoes and other vegetables	487 17
Groceries and provisions not enumerated	2,697 74
Drugs and medicines	1,506 96
Medical and surgical appliances	1,106 22
Surgical instruments	233 37
Beer, wine and spirits	70 52
Bedding, napery and general furnishings	2,218 88
Brooms, brushes, mops, soap and cleaning appliances	424 26
Fuel	2,917 06
Electric light, gas, oil, candles	1,221 41
Water supply	72 15
Salaries and wages	5,274 50
Taxes, interest and insurance	475 98
Contingencies	350 73
Repairs, ordinary	2,668 35
Ice supply	60 00
Telephone	
Printing, stationery, etc	415 12
Clothing for patients	427 51
Hay and straw	349 53
Total	$30,368 46
Government aid for 1921	$5,078 90

CITY HOSPITAL, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	339
Admitted	7,981
Births in Hospital	853
Total number under treatment	9,173
Discharged	8,284
Died	493
Under treatment, 30th September, 1921	396
	9,173

Sex.

Male	4,113
Female	5,060
	9,173

Revenue.

From the Province of Ontario	$26,941 80
From the City of Hamilton	216,943 67
From the County of Wentworth	4,354 50
From patients for maintenance and treatment	170,556 02
From other sources	
Total	$418,795 99

Expenditures.

Butchers' meat	$29,953 55
Butter and eggs	20,799 98
Flour, bread and meal	7,305 85
Milk	17,203 89
Tea and coffee	1,399 60
Potatoes and other vegetables	5,322 07
Groceries and provisions not enumerated	29,644 78
Drugs and medicines	7,338 56
Medical and surgical appliances	13,876 11
Surgical instruments	
Beer, wine and spirits	1,374 76
Bedding, napery and general house furnishings	25,094 56
Brooms, brushes, mops, soap and cleaning appliances	5,444 01
Fuel	73,973 71
Electric light, gas, oil and candles	4,740 94
Water supply	4,268 43
Laboratory	3,262 99
Salaries and wages	157,816 62
Insurance and taxes	1,675 19
Contingencies	10,076 66
Repairs, ordinary	12,922 04
Clothing for patients	385 32
X-Ray	3,103 20
Merchandise, printing and postage	4,566 19
Hay and straw	1,019 84
Night watchmen, service	297 88
Hardware and paints	2,493 85
Total	$445,360 58
Government grant for 1921	$45,917 80

ST. JOSEPH'S HOSPITAL, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	77
Admitted	2,589
Number of births	108
Total number under treatment	2,774
Discharged	2,598
Died	86
Under treatment, 30th September, 1921	90
	2,774

Sex.

Male	1,146
Female	1,628
	2,774

Revenue.

From the Province of Ontario	$5,504 64
From the City of Hamilton	4,469 00
Income from endowments, investments, etc.	
From paying patients themselves	85,686 13
Subscriptions, donations and bequests in cash	1,185 11
From all other sources	
Total	$96,844 88

ST. JOSEPH'S HOSPITAL, HAMILTON.—*Continued.*

Expenditures.

Butchers' meat and fish	$10,049 90
Butter and eggs	6,974 02
Flour, bread and meal	2,906 18
Milk	4,389 45
Tea and coffee	1,467 36
Potatoes and other vegetables	2,770 81
Groceries and other provisions not enumerated	7,490 10
Drugs and medicines	3,727 24
Medical and surgical appliances	4,448 22
Surgical instruments	480 21
Beer, wine and spirits	203 56
Bedding, etc.	7,107 98
Brooms, brushes, mops, soap and cleaning appliances	161 27
Fuel	$8,967 46
Electric light, gas, oil and candles	1,424 93
Water supply	431 93
Clothing for patients, including boots and shoes	296 06
Ice supply	90 25
Salaries and wages	19,530 31
Taxes, insurance and interest	2,777 79
Contingencies	3,155 60
Repairs, ordinary	3,465 05
Printing, stationery, etc	945 49
X-Ray	2,015 20
Telephones	390 54
Total	$95,666 91
Government grant for 1921	$8,103 60

PROVIDENCE HOSPITAL, HAILEYBURY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	27
Admitted	998
Births in Hospital	34
Total number under treatment	1,059
Discharged	975
Died	54
Under treatment, 30th September, 1921	30
	1,059

Sex.

Male	5 58
Female	5 01
	10 59

Revenue.

From Government of Ontario	$4,387 30
From Town of Haileybury	
From patients for maintenance and treatment	37,809 08
From other municipalities	1,090 70
From subscriptions, bequests and donations of private individuals	5,177 92
From other sources	
Income from endowments, etc.	
Total	$48,465 00

Expenditures.

Butchers' meat	$2,190 92
Butter and eggs	1,924 42
Flour, bread and meal	765 55
Milk	2,168 57
Tea and coffee	700 00
Potatoes and other vegetables	752 00
Groceries and provisions not enumerated	1,280 08
Drugs, medicines	2,108 13
Medical and surgical appliances and surgical instruments	436 97
Beer, wine and spirits	
Bedding, napery and general house furnishings	876 94
Brooms, brushes, etc.	323 14
Fuel	4,737 13
Electric light, gas, oil, candles	418 25
Ice supply	210 00
Printing, stationery, etc.	122 84
Hay and straw	129 85
Farm and grounds	149 75
Salaries and wages	5,236 00
Taxes and insurances	138 20
Repairs, ordinary	992 34
Contingencies	1,400 67
Clothing for patients	655 00
Payments of account of liabilities	22,233 60
Interest on debt	1,725 06
Total	$51,675 41
Government grant for 1921	$6,475 00

GENERAL HOSPITAL, INGERSOLL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	10
Admitted	191
Births in Hospital	44
Total number under treatment	245
Discharged	212
Died	20
Under treatment, 30th September, 1921	13
	245

Sex.

Male	90
Female	155
	245

Revenue.

From the Province	$1,183 70
From the Town of Ingersoll	1,000 00
From the County of Oxford	800 00
From patients themselves for maintenance and treatment	8,330 60
From subscriptions, donations and bequests from private individuals	1,317 24
From other sources	544 23
Total	$13,175 77

Expenditures.

Butchers' meat	$791 55
Butter and eggs	339 05
Bread	238 50
Milk	310 00
Tea and coffee	
Potatoes and other vegetables	14 50
Groceries and provisions not enumerated	965 95
Drugs and medicines	721 36
Medical and surgical appliances	
Bedding, napery and general house furnishings	395 00
Brooms, brushes, mops, soap and cleaning appliances	
Fuel	2,375 18
Electric light, gas, oil, candles	93 79
Salaries and wages	3,074 99
Insurance and taxes	157 54
Contingencies	691 80
Repairs, ordinary and additions	1,233 33
Water	65 28
Farm and grounds	198 61
Advertising and printing	116 37
Beer, wine and spirits	132 87
Interest	190 60
Total	$12,106 27

Government grant for 1921 .... $420 00

GENERAL HOSPITAL, KENORA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October 1920	11
Admitted	189
Number of births in hospital.	30
Total number under treatment	230
Discharged	207
Died	7
Under treatment, 30th September, 1921	16
	230

Sex.

Male	127
Female	103
	230

Revenue.

From the Province of Ontario	$2,146 60
From the Town of Kenora	2,000 00
From other municipalities	
From paying patients	9,872 65
Subscriptions, donations, etc.	
Care of lumber and railway camp cases	1,414 00
From other sources	
Total	$15,433 25

Expenditures.

Potatoes and other vegetables	$66 20
Butchers' meat and fish	1,039 42
Butter and eggs	450 92
Bread	230 88
Milk	343 75
Groceries and provisions not enumerated, flour and meal	1,220 50

GENERAL HOSPITAL, KENORA.—*Continued.*

Drugs and medicines and surgical appliances	$730 57	Contingencies	$889 89
Surgical instruments		Repairs, ordinary	1,183 98
Beer, wine and spirits		Insurance	161 75
Bedding, napery and general house furnishings	84 85	Stationery, postage, etc	35 90
Fuel	2,047 57	Hay and straw	
Electric light, gas, oil and candles and water		Clothing for patients	
Ice		Brooms, mops, etc	
Salaries and wages	5,292 30	Total	$13,778 48
		Government aid for 1921	$1,017 30

ST. JOSEPH'S HOSPITAL, KENORA.

The following summaries show the operation of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	15
Admitted	264
Births in Hospital	8
Total number under treatment	287
Discharged	257
Died	18
Under treatment, 30th September, 1921	12
	287

Sex.

Male	168
Female	119
	287

Revenue.

From the Province of Ontario	$3,395 95
From the Town of Kenora	368 00
From Dominion Government	415 75
From patients themselves for maintenance and treatment	7,414 83
From subscriptions, donations and bequests of private individuals	996 02
From other sources	824 42
Total	$13,414 97

Expenditures.

Butchers' meat and fish	$1,039 00
Butter and eggs	1,510 54
Flour, bread and meal	383 51
Milk	761 94
Tea and coffee	93 67
Potatoes and other vegetables	213 45
Groceries and provisions not enumerated	858 27
Drugs and medicines	317 26
Surgical instruments	
Medical and surgical appliances	
Beer, wine and spirits and mineral water	120 12
Bedding, napery and general house furnishings	1,138 19
Brooms, brushes, mops, soap and cleaning appliances	101 87
Fuel	1,410 55
Electric light, gas, oil and candles	95 63
Clothing for patients	287 80
Ice	
Salaries and wages	1,278 00
Insurance	17 37
Contingencies	361 41
Repairs, ordinary	268 70
Hay and straw	691 67
Printing, stationery, etc.	54 93
Coffins and funerals	
Total	$11,003 88
Government grant for 1921	$2,304 90

GENERAL HOSPITAL, KINCARDINE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	5
Admitted	225
Births in Hospital	35
Total number under treatment	265
Discharged	250
Died	5
Under treatment, 30th September, 1921	10
	265

GENERAL HOSPITAL, KINCARDINE.—*Continued.*

Sex.

Male	101
Female	164
	265

Revenue.

From the Province of Ontario	$770 20
From the Town of Kincardine	
From patients for maintenance and treatment	6,000 53
From subscriptions, donations and bequests from private individuals	602 24
From other sources	37 63
From County of Bruce	
Total	$7,410 60

Expenditures.

Butchers' meat	$258 55
Butter and eggs	304 84
Flour, bread and meal	243 04
Milk	40 50
Tea and coffee	$63 50
Potatoes and other vegetables	
Groceries and provisions not enumerated	272 66
Drugs and medicines	249 37
Medical and surgical appliances	
Bedding, napery and general house furnishings, brooms, brushes, mops, soap and cleaning appliances	237 02
Fuel	1,794 91
Electric light, gas, oil and candles	157 44
Beer, wine and spirits	93 65
Water supply	40 00
Salaries and wages	3,131 75
Contingencies	248 08
Repairs, ordinary	228 76
Hay and straw	320 55
Printing and postage	35 00
Taxes and insurance	35 00
Repairs and additions	552 80
Total	$8,307 42
Government grant for 1921	$693 10

GENERAL HOSPITAL, KINGSTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	129
Admitted	3,312
Births in Hospital	148
Total number under treatment	3,589
Discharged	3,331
Died	122
Under treatment, 30th September, 1921	136
	3,589

Sex.

Male	1,500
Female	2,089
	3,589

Revenue.

From the Province of Ontario	$8,738 11
From the City of Kingston	15,000 00
From the County of Frontenac	3,000 00
From other municipalities in the Province	3,390 00
From paying patients themselves for treatment	91,395 09
Subscriptions, donations and bequests	7,101 68
From all other sources not enumerated	58 67
Total	$128,683 55

Expenditures.

Butchers' meat	$9,887 43
Butter and eggs	8,279 68
Flour, bread and meal	3,969 79
Milk	5,533 45
Tea and coffee	1,753 60
Potatoes and other vegetables	2,092 63
Groceries and provisions not enumerated	13,951 65
Drugs and medicines	3,755 92
Surgical instruments and appliances	6,329 32
Beer, wine and spirits	958 55
Bedding, napery and general house furnishings	3,072 03
Brooms, brushes, mops, soap and cleaning appliances	1,718 47
Fuel	11,900 60
Electric light, gas, oil and candles	4,550 92
Water supply	522 07
Ice	455 50
Salaries and wages	31,814 14
Insurance and taxes	474 77
Contingencies	11,814 73
Repairs, ordinary	5,379 04
Printing, stationery, etc.	1,532 25
Clothing for patients	30 00
Total	$129,776 54
Government grant for 1921	$13,170 00

HOTEL DIEU HOSPITAL, KINGSTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	103
Admitted	1,928
Births in Hospital	159
Total number under treatment	2,190
Discharged	2,001
Died	93
Under treatment, 30th September, 1921	96
	2,190

Sex.

Male	886
Female	1,304
	2,190

Revenue.

From the Province of Ontario	$6,895 25
From the City of Kingston	5,000 00
From the County of Frontenac	2,000 00
From other municipalities	210 00
From patients themselves for maintenance and treatment	46,046 83
Subscriptions, donations and bequests	3,153 53
From other sources not enumerated	10,511 80
Total	$73,817 41

Expenditures.

Butchers' meat	$6,195 58
Butter and eggs	5,271 74
Flour, bread and meal	2,177 55
Milk	3,607 73
Tea and coffee	3,221 88
Potatoes and other vegetables	2,681 01
Groceries and provisions not enumerated	7,098 96
Drugs and medicines	1,908 95
Medical and surgical appliances	1,697 84
Surgical instruments	
Beer, wine and spirits	1,674 19
Bedding, napery and general house furnishings	8,355 80
Brooms, brushes, mops, soap and cleaning appliances	534 26
Fuel	12,063 63
Light: gas, oil and candles	3,423 27
Water supply	889 20
Ice	18 00
Salaries and wages	6,545 89
Taxes and insurance	1,033 23
Hay and straw	131 35
Contingencies	1,578 73
Repairs, ordinary	6,587 28
Printing, stationery, etc.	599 05
Clothing for patients	109 35
Total	$77,404 47
Government grant for 1921	$11,508 00

KITCHENER AND WATERLOO HOSPITAL, KITCHENER.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	55
Admitted	1,165
Births in Hospital	100
Total number under treatment	1,320
Discharged	1,228
Died	63
Under treatment, 30th September, 1921	29
	1,320

Sex.

Male	529
Female	791
	1,320

Revenue.

From the Province of Ontario	$1,080 86
From the Town of Kitchener	5,582 26
From the County of Waterloo	1,000 00
From the Town of Waterloo	1,000 00
From patients for maintenance and treatment	38,412 51
From subscriptions, donations and bequests from private individuals	1,674 42
From other sources	209 00
Total	$48,959 05

Expenditures.

Butchers' meat	$4,222 72
Butter and eggs	3,149 08
Flour, bread and meal	1,322 54
Milk	2,221 31

KITCHENER AND WATERLOO HOSPITAL, KITCHENER.—*Continued.*

Tea and coffee	$435 50
Potatoes and other vegetables	2,027 59
Groceries and provisions not enumerated	2,776 59
Drugs and medicines	
Medical and surgical appliances	7,438 91
Beer, wine and spirits	
Bedding, napery and general house furnishings	
Brooms, brushes, mops, soap and cleaning appliances	937 33
Fuel	5,993 42
Electric light, gas, oil and candles	2,323 94
Ice supply	299 05
Salaries and wages	16,175 36
Insurance and taxes	407 80
Contingencies	2,893 26
Repairs, ordinary	3,187 89
Water supply	331 66
Prnting and postage	934 80
Bank overdraft	452 73
Total	$57,531 48
Government grant for 1920	$534 50

GENERAL HOSPITAL, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	226
Admitted	4,588
Births in Hospital	278
Total number under treatment	5,092
Discharged	4,647
Died	209
Under treatment, 30th September, 1921	236
	5,092

Sex.

Male	2,301
Female	2,791
	5,092

Revenue.

From the Province of Ontario	$14,262 08
From the City of London	133,538 34
From the County of Middlesex in payment of patients	5,968 80
From paying patients themselves	172,116 70
From income from property or investments	526 71
Subscriptions, donations and other sources	8,178 59
Bank overdraft 1921	2,877 25
	$337,468 47

Expenditures.

Butchers' meat	$36,984 27
Butter and eggs	18,345 01
Flour, bread and meal	8,190 62
Milk	14,104 22
Tea and coffee	3,534 21
Potatoes & other vegetables	6,991 74
Groceries and provisions not enumerated	25,249 67
Drugs and medicines	14,349 67
Surgical instruments	20,908 47
Medical and surgical appliances	1,300 30
Beer, wine and spirits	865 78
Bedding, napery and general house furnishings	13,340 07
Brooms, brushes, mops, soap and cleaning appliances	2,987 69
Fuel	35,281 20
Light: gas, oil and candles	3,079 17
Water	1,730 57
Ice	1,791 60
Salaries and wages	87,867 07
Insurance	1,423 63
Contingencies	6,496 27
Repairs, ordinary	18,993 71
Printing and stationery	5,251 77
Laundry	8,402 15
Bank overdraft	
Total	$337,468 47
Government grant for 1921	$25,486 40

ST. JOSEPH'S HOSPITAL, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	97
Admitted	2,269
Births in Hospital	199
Total number under treatment	2,565
Discharged	2,375
Died	65
Under treatment, 30th September, 1921	125
	2,565

ST. JOSEPH'S HOSPITAL, LONDON.—*Continued.*

Sex.

Male	1,020
Female	1,545
	2,565

Revenue.

From the Province of Ontario	$1,699 12
From the City of London	364 50
From County of Middlesex	211 00
From other municipalities	
From paying patients	109,869 15
Subscriptions, donations, etc.	
Other sources	
Total	$112,143 77

Expenditures.

Butchers' meat	$10,039 32
Butter and eggs	8,364 03
Flour, bread and meal	3,196 41
Milk	6,221 88
Tea and coffee	2,356 28
Potatoes and other vegetables	1,350 45
Fruit	2,010 29
Groceries and provisions not enumerated	$10,107 50
Drugs and medicines	6,398 24
Medical and surgical appliances	6,528 64
Beer, wine and spirits	178 96
Bedding, napery and general house furnishings	8,753 85
Brooms, brushes, mops, soap and cleaning appliances	1,879 87
Fuel	10,180 51
Light: gas, oil and candles	701 47
Water	469 39
Telephone	192 37
Ice	844 25
Salaries and wages	13,093 42
Insurance, taxes and interest	9,466 47
Contingencies	1,507 97
Repairs, ordinary	7,866 65
Printing, stationery, postage, etc.	251 70
Total	$112,574 05
Government grant for 1921	$3,251 90

VICTORIA HOME FOR INCURABLES, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	51
Admitted	36
Births in Hospital	
Total number under treatment	87
Discharged	7
Died	12
Under treatment, 30th September, 1921	68
	87

Sex.

Male	41
Female	46
	87

Revenue.

From the Province of Ontario	$9,775 50
From the City of London	4,173 85
From other municipalities in the Province	
From paying patients themselves	16,471 27
From subscriptions, donations, etc.	2,307 56
From other sources	449 89
Total	$23,178 07

Expenditures

Butchers' meat and fish	$1,556 67
Butter and eggs	1,407 55
Flour, bread and meal	961 40
Milk	1,760 06
Tea and coffee	484 42
Potatoes and other vegetables	617 37
Groceries and provisions not enumerated	2,545 60
Drugs and medicines	
Medical and surgical appliances	415 28
Surgical instruments	
Beer, wine and spirits	47 40
Bedding, napery and general house furnishings	3,173 10
Brooms, brushes, mops, soap and cleaning appliances	278 77
Fuel	1,866 15
Electric light, gas, oil and candles	636 79
Water supply	341 74
Salaries and wages	9,342 36
Taxes and insurance	256 63
Contingencies	367 24
Repairs, ordinary	448 71
Clothing for patients	
Hay and straw	
Printing and postage	72 97
General relief	1,508 22
Total	$28,088 43
Government grant for 1921	$12,488 50

BETHESDA HOSPITAL, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	53
Number admitted	448
Births in Hospital	343
Total number under treatment	844
Discharged	789
Died	36
Under treatment, 30th September, 1921	19
	844

Sex.

Male	501
Female	343
	844

Revenue.

From the Province of Ontario	$2,955 36
From the City of London	500 00
From County of Middlesex	
From other municipalities of the Province	
From paying patients	24,222 76
From property belonging to the Hospital	
From subscriptions, bequests and donations from private individuals	6,693 17
From other sources not enumerated	
Deficit	7,360 76
Total	$41,732 05

Expenditures.

Butchers' meat, Butter and eggs, Flour, bread and meal, Milk, Tea and coffee, Potatoes and other vegetables, Groceries and provisions not enumerated	$11,800 23
Drugs and medicines, Medical and surgical appliances	2,283 88
Bedding, napery and general house furnishings	5,845 53
Brooms, brushes, mops, soap and cleaning appliances	202 24
Fuel	2,718 45
Electric light, gas, oil, candles	
Water supply	
Ice supply	
Salaries and wages	10,898 42
Taxes, insurance and rent	2,559 00
Contingencies	4,421 72
Repairs, ordinary	76 48
Telephone	
Printing, stationery, etc.	212 41
Laundry expenses	466 49
Surgical instruments	
Total	$41,484 85
Government grant for 1921	$3,180 00

LISTOWEL MEMORIAL HOSPITAL, LISTOWEL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	8
Admitted	191
Births in the Hospital	16
Total number under treatment	215
Discharged	199
Died	9
Under treatment, 30th September, 1921	7
	215

Sex.

Male	83
Female	132
	215

Revenue.

From the Province of Ontario	$556 76
From the Town of Listowel	
From the County of Perth	1,500 00
From other municipalities	100 00
From patients for maintenance and treatment	8,394 10
Income from endowments, investments, etc.	
From subscriptions, donations and bequests from private individuals	1,230 74
From all other sources	354 00
Total	$12,135 60

Expenditures.

Butchers' meat	$407 57
Butter and eggs	399 42

LISTOWEL MEMORIAL HOSPITAL, LISTOWEL.—*Continued.*

Flour, bread and meal	$197	26	Fuel	$1,221	81
Milk	329	00	Electric light, gas, oil, candles	167	72
Tea and coffee	69	97	Ice		
Potatoes and other vegetables	83	95	Salaries and wages	4,642	71
Groceries and provisions not enumerated	483	58	Taxes and insurance		
Drugs and medicines	290	66	Printing, stationery, etc.	154	28
Medical and surgical appliances and surgical instruments			Contingencies	706	50
Beer, wine and spirits	3	10	Repairs, ordinary	675	05
Bedding, napery and general house furnishings	87	59	Water supply	25	62
Brooms, brushes, mops, soap and cleaning appliances	99	05	Farm and grounds	13	85
			Bank overdraft 1920	1,891	97
			Total	$11,950	66
			Government grant for 1921	$1,380	60

THE ROSS MEMORIAL HOSPITAL, LINDSAY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	24
Admitted	543
Births in Hospital	50
Total number under treatment	617
Discharged	566
Died	33
Under treatment, 30th September, 1921	18
	617

Sex.

Male	262
Female	355
	617

Revenue.

From the Province of Ontario	$1,183	40	
From the Town of Lindsay	600	00	
From the County of Victoria	1,100	00	
From other municipalities			
From patients themselves for maintenance and treatment	16,117	75	
Income from endowments	2,378	55	
Subscriptions, donations and bequests of private individuals	3,890	05	
From other sources not enumerated			
Total	$25,269	75	

Expenditures.

Butchers' meat	$1,573	43	
Butter and eggs	1,349	75	
Flour, bread and meal	718	65	
Milk	878	15	
Tea and coffee	198	85	
Potatoes and other vegetables	369	39	
Groceries and provisions not enumerated	1,142	05	
Drugs and medicines	2,369	31	
Medical and surgical appliances			
Surgical instruments			
Beer, wine and spirits	42	65	
Bedding, napery and general house furnishings	673	12	
Brooms, brushes, mops, soap and cleaning appliances	327	95	
Fuel	2,185	13	
Electric light, gas, oil and candles	80	42	
Water supply	85	00	
Clothing for patients, including boots and shoes			
Ice			
Salaries and wages	6,067	55	
Contingencies	1,859	79	
Repairs, ordinary and concrete drive-(way)	2,657	63	
Taxes and insurance	129	20	
Stationery, postage, etc.	198	80	
Painting	396	90	
Deficit Oct. 1st, 1920	842	78	
Total	$24,146	50	
Government grant for 1921	$1,541	00	

GENERAL HOSPITAL, MATTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	16
Admitted	271
Total number under treatment	287
Discharged	254
Died	17
Under treatment, 30th September, 1921	16
	287

GENERAL HOSPITAL, MATTAWA.—*Continued.*

Sex.

Male	232
Female	55
	287

Revenue.

From the Province of Ontario	$2,433 66
From the Town of Mattawa	100 00
From patients for maintenance and treatment	5,996 53
From subscriptions, bequests and donations of private individuals	889 26
From other sources	703 73
Total	$10,123 18

Expenditures.

Butchers' meat	$414 60
Butter and eggs	513 74
Flour, bread and meal	332 01
Groceries and provisions not enumerated	843 09
Drugs and medicines	1,247 21
Medical and surgical appliances	
Beer, wine and spirits	$24 30
Surgical instruments	
Bedding, napery and general house furnishings	294 82
Brooms, brushes, etc.	200 71
Fuel	1,066 55
Electric light, gas, oil, candles	228 83
Water supply	135 00
Milk	302 35
Tea and coffee	228 22
Potatoes and other vegetables	198 50
Printing, stationery, etc.	71 56
Hay and straw	37 00
Ice	
Salaries and wages	2,001 96
Taxes and insurance	50 00
Repairs, ordinary and additions	1,221 24
Contingencies	130 10
Clothing for patients	223 39
Coffins and funerals	
Farm and grounds	373 22
Total	$10,138 40
Government grant for 1921	$2,721 50

GENERAL HOSPITAL, MIDLAND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	393
Admitted	55
Births in Hospital	16
Total number under treatment	464
Discharged	428
Died	19
Under treatment, 30th September, 1921	17
	464

Sex.

Male	180
Female	284
	464

Revenue.

From the Province of Ontario	$708 68
From the Town of Midland	300 00
From the County of Simcoe	500 00
From other municipalities	
From patients themselves for maintenance and treatment	11,013 29
From subscriptions, donations and bequests from private individuals	1,705 50
From other sources	51 25
Total	$14,278 72

Expenditures.

Butchers' meat	$404 68
Butter and eggs	339 00
Flour, bread and meal	323 60
Milk	4 00
Tea and coffee	51 43
Potatoes and other vegetables	153 43
Groceries and provisions not enumerated	733 19
Drugs and medicines	1,255 83
Surgical instruments and appliances	
Beer, wine and spirits	16 80
Bedding, napery and general house furnishings	300 09
Brooms, brushes, mops, soap and cleaning appliances	70 58
Fuel	692 18
Light: electric, gas, oil, and candles and X-Ray	137 63
Water supply	120 02
Ice	
Salaries and wages	3,584 01
Printing, stationery, etc.	156 78
Contingencies	108 55
Repairs, ordinary and additions	3,851 05
Taxes and insurance	227 20
Laundry	836 03
Hay and straw	413 27
Telephone	
Farm and grounds	146 93
Total	$13,926 28
Government grant for 1921	$1,226 00

LADY MINTO HOSPITAL, NEW LISKEARD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	9
Admitted	248
Births in Hospital	26
Total number under treatment	283
Discharged	253
Died	20
Under treatment, 30th September, 1921	10
	283

Sex.

Male	156
Female	127
	283

Revenue.

From the Province of Ontario	$912 34
From the Town of New Liskeard	150 00
From other municipalities	205 00
From Victorian Order	
From patients for maintenance and treatment	9,225 78
From subscriptions, donations and bequests from private individuals	1,845 67
From other sources	2,218 71
Total	$14,557 50

Expenditures.

Butchers' meat	$594 34
Butter and eggs	573 24
Flour, bread and meal	563 1
Milk	677 7
Tea and coffee	102 0-
Potatoes and other vegetables	217 09
Groceries and provisions not enumerated	934 42
Drugs and medicines	932 03
Medical and surgical appliances	
Beer, wine and spirits	
Bedding, napery and general house furnishings	1,304 95
Brooms, brushes, mops, soap and cleaning appliances	
Fuel	179 27
Electric light, gas, oil and power	1,542 02
Ice supply	331 60
Salaries and wages	65 28
Repairs, ordinary and additions	4,101 33
Laundry	1,832 46
Printing, stationery, etc	309 43
Taxes and insurance	459 58
Contingencies	
Nurses' Home Fund	
Farms and grounds	17 20
Total	$14,737 56
Government grant for 1921	$450 00

GENERAL HOSPITAL, NIAGARA FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	26
Admitted	609
Births in Hospital	117
Total under treatment	752
Discharged	685
Died	30
Under treatment, 30th September 1921	37
	752

Sex.

Male	355
Female	397
	752

Revenue.

From the Province of Ontario	$1,718 59
From the Town of Niagara Falls	2,500 00
From the County of Welland	2,000 00
From other municipalities	500 00
From patients for maintenance and treatment	24,336 28
From subscriptions, donations, and bequests from private individuals	17 00
From other sources	569 74
Total	$31,641 61

Expenditures.

Butchers' meat	$2,263 58
Butter and eggs	1,922 59
Flour, bread and meal	740 13

GENERAL HOSPITAL, NIAGARA FALLS.—*Continued.*

Milk	$1,247	66	Electric light, gas, oil, candles ..	$233	92
Tea and coffee	366	36	Ice supply		
Potatoes and other vegetables ..	1,171	83	Salaries and wages	8,326	09
Groceries and provisions not enumerated	1,517	37	Contingencies	2,208	49
Drugs and medicines	2,894	68	Repairs, ordinary	1,400	03
Medical and surgical appliances			Taxes, insurance, rent	1,280	54
Surgical instruments			Water supply		
Beer, wine and spirits			Printing and postage		
Bedding, napery and general house furnishings	892	53	Laundry and ambulance		
Brooms, brushes, mops, soap and cleaning appliances	320	18	Telephone		
Fuel	2,945	41	Bank overdraft		
			Total	$29,731	39
			Government grant for 1921	$2,370	50

COTTAGE HOSPITAL, NIAGARA-ON-THE-LAKE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients

Number under treatment, 1st October, 1920	
Admitted	128
Births in Hospital	21
Total number under treatment	149
Discharged	134
Died	8
Under treatment, 30th September, 1921	7
	149
Male	73
Female	76
	149

Revenue.

From the Province of Ontario		
From the City of Niagara-on-the-Lake		
From the County of Welland		
From patients for maintenance and treatment	5,388	75
From other sources	642	50
Total	$6,031	25

Expenditures

Butcher's meat	$539	11
Butter and eggs	200	94
Flour, bread and meal	140	04
Milk	120	05
Tea and coffee	46	60
Potatoes and other vegetables	75	80
Groceries and provisions not enumerated	334	68
Drugs and medicines	352	37
Medical and surgical appliances		
Surgical instruments		
Beer, wine and spirits		
Bedding, napery and general house furnishings	816	18
Brooms, brushes, mops, soap and cleaning appliances	27	40
Fuel	455	91
Electric light, gas, oil and candles	108	25
Water supply	39	39
Salaries and wages	1,857	50
Insurance and taxes	120	23
Contingencies	251	72
Repairs, ordinary	216	68
Clothing for patients		
Merchandise, printing and postage	25	56
Total	$5,728	41
Government grant for 1921	$873	60

QUEEN VICTORIA MEMORIAL HOSPITAL, NORTH BAY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	23
Admitted	587
Births in Hospital	65
Total number under treatment	675
Discharged	628
Died	26
Under treatment, 30th September, 1921	21
	675

Sex.

Male	333
Female	342
	675

Revenue.

From the Province of Ontario ..	$1,314 78
From the Town of North Bay .	2,376 00
From other municipalities	97 50
From patients themselves for maintenance and treatment ..	18,317 18
Subscriptions, donations, etc. ...	1,277 39
From other sources	16 25
Bank overdraft	2,603 56
Total	$26,002 66

Expenditures.

Butchers' meat	$1,025 74
Butter and eggs	981 38
Flour, bread and meal	576 77
Milk	1,205 64
Tea and coffee	154 79
Potatoes and other vegetables ..	418 46
Groceries and provisions not enumerated	1,684 98
Drugs and medicines	237 75
Surgical instruments and appliances	989 56
Bedding, napery and general house furnishings	1,970 28
Brooms, brushes, mops, soap and cleaning appliances	355 51
Fuel	3,549 00
Electric light, gas, oil, candles ..	235 12
Water supply	49 15
Ice	80 00
Salaries and wages	7,101 94
Contingencies	1,620 92
Repairs, ordinary	708 82
Beer, wine and spirits	112 70
Taxes and insurance	463 96
Printing and postage	230 51
Surgical instruments	
Bank overdraft	2,148 11
Interest and exchange.....	101 57
Total	$26,002 66
Government grant for 1921	$3,578 50

GENERAL HOSPITAL, ORANGEVILLE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	11
Admitted	193
Births in Hospital	37
Total number under treatment	241
Discharged	226
Died	10
Under treatment, 30th September, 1921	5
	241

Sex.

Male	118
Female	123
	241

Revenue.

From the Province of Ontario ..	$850 99
From the Town of Orangeville	
From the County of Dufferin	
From other municipalities	
From patients for maintenance and treatment	7,771 79
From endowments, investments, etc.	
From subscriptions, donations, and bequests from private individuals	192 90
From other sources	
Total	$8,815 68

Expenditures.

Butchers' meat	$420 88
Butter and eggs	636 71
Flour, bread and meal	242 20
Milk	385 03
Tea and coffee	$112 04
Potatoes and other vegetables	
Groceries and provisions not enumerated	984 49
Drugs and medicines	949 02
Medical and surgical appliances	
Beer, wine and spirits	98 85
Bedding, napery and general house furnishings	179 05
Brooms, brushes, mops, soap and cleaning appliances	57 93
Fuel	995 57
Light: gas, oil and candles	127 98
Water	
Ice supply	42 04
Salaries and wages	2,299 00
Laundry	1,263 10
Contingencies	281 48
Repairs, ordinary and additions.	271 75
Printing, stationery and postage	66 40
Taxes and insurance	21 25
Telephone	64 37
Total	$9,499 14
Government grant for 1921	$1,488 00

GENERAL HOSPITAL, ORILLIA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	28
Admitted	660
Births in Hospital	106
Total number under treatment	794
Discharged	731
Died	32
Under treatment, 30th September, 1921	31
	794

Sex.

Male	323
Female	471
	794

Revenue.

From the Province of Ontario	$1,818 85
From the Town of Orillia	1,000 00
From the County of Simcoe	500 00
From patients themselves for maintenance and treatment	16,985 67
From subscriptions, donations and bequests from private individuals	265 38
From other sources	264 00
Total	$20,833 90

Expenditures.

Butchers' meat	$1,102 81
Butter and eggs	413 78
Flour, bread and meal	700 64
Milk	1,351 86
Tea and coffee	81 42
Groceries and provisions not enumerated	2,611 39
Drugs and medicines	629 53
Medical and surgical appliances	801 23
Bedding, napery, and general house furnishings	523 65
Brooms, brushes, mops, soap and cleaning appliances	
Fuel	892 82
Electric light, gas, oil and candles	307 88
Water supply	76 74
Beer, wine and spirits	
Salaries and wages	5,516 50
Taxes and insurance	97 34
Contingencies	231 00
Repairs, ordinary	850 37
Printing, stationery, etc.	1,684 28
Ice supply	70 00
Total	$17,943 24
Government grant for 1921	$2,948 00

GENERAL HOSPITAL, OSHAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	43
Admitted	875
Number of births in Hospital	115
Total number under treatment	1,033
Discharged	954
Died	46
Under treatment, 30th September, 1921	33
	1,033

Sex.

Male	410
Female	623
	1,033

Revenue.

From the Province of Ontario	$3,769 74
From the Town of Oshawa	1,025 75
From the County of Ontario	1,313 00
From paying patients	29,235 46
Subscriptions, donations, etc.	
From all other sources	993 50
Total	$36,337 45

Expenditures.

Butchers' meat and fish	$1,946 46
Butter and eggs	1,489 54
Flour, bread and meal	960 71
Milk	1,410 71
Tea and coffee	370 70
Potatoes and other vegetables	355 84
Groceries and provisions not enumerated	2,038 54
Drugs and medicines, Medical and surgical appliances	7,129 13

GENERAL HOSPITAL OSHAWA.—*Continued*

Beer, wine and spirits	20 40	Contingencies	6,554 91
Bedding, napery and general house furnishings	451 11	Repairs, ordinary	1,465 31
Brooms, brushes, mops, soap and cleaning appliances	600 49	X-Ray expenses	897 98
Fuel	5,303 94	Printing, stationery and postage	241 36
Electric light, gas, oil, candles	853 42	Taxes and insurance	459 22
Water supply	269 98	Telephones	119 43
Ice	225 38	Total	$43,642 82
Salaries and wages	10,478 36	Government aid for 1921	$2,790 10

GENERAL PROTESTANT HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	136
Admitted	3,116
Births in Hospital	7
Total number under treatment	3,259
Discharged	3,000
Died	123
Under treatment 30th September, 1921	136
	3,259

Sex.

Male	1,567
Female	1,692
	3,259

Revenue.

From the Province of Ontario	$5,455 09
From the City of Ottawa	20,747 70
From the County of Carleton	1,800 00
From other municipalities	1,325 00
From patients themselves for maintenance and treatment	128,154 41
Income from endowments, investments, etc.	
Subscriptions, donations, and bequests of private individuals	4,977 67
From other sources not enumerated	1,800 00
Total	$164,259 87

Expenditures.

Butchers' meat	$12,355 55
Butter and eggs	9,149 08
Flour, bread and meal	3,585 83
Milk	8,486 19
Tea and coffee	1,379 50
Potatoes and other vegetables	2,100 02
Groceries and provisions not enumerated	8,597 80
Drugs and medicines	7,178 06
Medical and surgical appliances	5,458 73
Surgical instruments	1,604 87
Beer, wine and spirits	1,351 89
Bedding, napery and general house furnishings	7,566 83
Brooms, brushes, mops, soap and cleaning appliances	2,944 04
Fuel	17,594 36
Electric light, gas, oil, candles	3,275 62
Water supply	767 40
X-Ray	9,683 30
Ice	340 20
Salaries and wages	46,308 64
Taxes and insurance, rent	323 50
Contingencies	2,409 24
Repairs, ordinary	6,074 06
Interest	775 90
Printing, stationery, etc.	2,633 03
Rent on annex	1,888 63
Total	$163,832 27
Government grant for 1921	$10,799 20

ROMAN CATHOLIC HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	169
Admitted	3,877
Births in Hospital	8
Total number under treatment	4,054
Discharged	3,724
Died	159
Under treatment, 30th September, 1921	171
	4,054

ROMAN CATHOLIC HOSPITAL, OTTAWA—*Continued.*

Sex.

Male	1,890
Female	2,164
	4,054

Revenue.

From the Province of Ontario	$10,756 40
From the City of Ottawa	31,061 50
From the County of Carleton	350 00
From other municipalities	610 00
From patients themselves for maintenance and treatment	100,605 40
Income from property	2,065 75
Subscriptions, donations and bequests of private individuals	
From all other sources not enumerated	33,464 13
Total	$178,913 18

Expenditures.

Butchers' meat	$9,860 31
Butter and eggs	10,025 98
Flour, bread and meal	3,722 81
Milk	7,944 66
Tea and coffee	1,172 69
Potatoes and other vegetables	2,878 03
Groceries and provisions not enumerated	7,138 73
Drugs and medicines	8,827 26
Medical and surgical appliances	7,923 37
Surgical instruments	6,302 30
Beer, wine and spirits	2,074 89
Bedding, napery and general house furnishings	18,698 30
Brooms, brushes, mops, soap and cleaning appliances	2,143 87
Fuel	20,917 38
Electric light, gas, oil, candles	4,361 63
Water supply	563 00
Clothing for patients, including boots and shoes	2,500 00
Ice	700 00
Salaries and wages	31,106 92
Taxes and insurance	2,538 27
Contingencies	4,279 23
Repairs, ordinary and additions	4,240 13
Printing, stationery, etc	1,885 29
Telephones	734 51
Radiographic dept	12,244 39
Total	$174,783 95
Government grant for 1921	$15,090 30

MATERNITY HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	33
Admitted	647
Number of births	613
Total number under treatment	1,293
Discharged	1,228
Died	18
Under treatment, 30th September, 1921	47
	1,293

Sex.

Male	326
Female	967
	1,293

Revenue.

From the Province of Ontario	$582 90
From the City of Ottawa	2,400 00
From the County of Carleton	100 00
From paying patients themselves	31,832 99
From subscriptions and donations	148 75
From other sources	
Total	$35,064 64

Expenditures.

Butchers' meat	2,234 76
Butter and eggs	1,757 36
Flour, bread and meal	671 50
Milk	1,180 08
Tea and coffee	302 30
Potatoes and other vegetables	1,078 51
Groceries and provisions not enumerated	928 70
Drugs and medicines	1,001 83
Medical and surgical appliances	281 33
Surgical dressings	2,294 05
Bedding, napery and general house furnishings	531 26
Brooms, brushes, mops, soap and cleaning appliances	224 13
Fuel	2,055 62
Gas, oil, candles and electric light and power	1,226 88
Water supply	175 80
Beer, wine and spirits	6 60
Ice	243 50
Salaries and wages	12,873 15
Stationery, printing, etc.	254 88
Contingencies	444 90
Repairs, ordinary	1,412 73
Taxes and insurance	7 53
Laundry	1,180 00
Rent	1,163 50
Total	$33,530 90
Government grant for 1921	$867 00

MISERICORDIA MATERNITY HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	143
Admitted	333
Births in Hospital	282
Total number under treatment	758
Discharged	591
Died	2
Under treatment, 30th September, 1921	165
	758

Sex.

Male	236
Female	522
	758

Revenue.

From the Province of Ontario	$2,239 19
From the City of Ottawa	3,750 00
From the County of Carleton	50 00
From patients themselves for maintenance and treatment	7,700 84
Subscriptions, donations and bequests	16,880 86
From other sources not enumerated	765 00
Total	$31,385 89

Expenditures.

Butchers' meat	$1,248 23
Butter and eggs	1,346 67
Flour, bread and meal	1,470 38
Milk	4,829 47
Tea and coffee	1,236 23
Potatoes and other vegetables	2,190 98
Groceries and provisions not enumerated	3,574 47
Drugs and medicines	1,369 18
Medical and surgical appliances	636 57
Surgical instruments	584 04
Beer, wine and spirits	95 10
Bedding, napery and general house furnishings	3,797 58
Brooms, brushes, mops, soap and cleaning appliances	322 64
Fuel	4,790 70
Light: gas, oil, and candles	828 34
Water supply	468 53
Hay and straw	382 49
Clothing for patients, including boots and shoes	1,846 69
Ice	582 57
Salaries and wages	4,032 50
Taxes and insurance	741 66
Contingencies	601 30
Repairs, ordinary	4,137 22
Printing, stationery, etc.	425 10
Coffins and funerals	72 00
Total	$41,610 64
Government grant for 1921	$3,897 00

ST LUKE'S GENERAL HOSPITAL, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	109
Admitted	2,374
Births in Hospital	2
Total number under treatment	2,485
Discharged	2,290
Died	69
Under treatment, 30th September, 1921	126
	2,485

Sex.

Male	1,425
Female	1,060
	2,485

Revenue.

From the Province of Ontario	$2,828 27
From the City of Ottawa	10,596 50
From the County of Carleton	300 00
From paying patients themselves	130,150 03
Income from investments	368 06
From subscriptions and donations	529 94
From other sources	941 71
Total	$145,714 51

Expenditures.

Butchers' meat	$12,671 63
Butter and eggs	9,249 52
Flour, bread and meal	3,175 08
Milk	6,030 49
Tea and coffee	1,070 28
Potatoes and other vegetables	2,752 51
Groceries and provisions not enumerated	8,781 01

ST LUKE'S GENERAL HOSPITAL, OTTAWA —*Continued.*

Drugs and medicines	7,390 58
Medical and surgical appliances	4,285 50
Surgical instruments	522 85
Beer, wine and spirits	614 54
Bedding, napery and general house furnishings	1,925 47
Brooms, brushes, mops, soap and cleaning appliances	1,980 73
Fuel	14,553 56
Gas, oil, candles and electric light	2,661 37
Ice	160 46
Salaries and wages	45,866 07
Taxes, insurance and interest	192 35
Contingencies	2,568 52
Repairs, ordinary	5,575 42
Printing and postage	975 62
Clothing for patients	
Water supply	408 52
X-Ray supply	3,246 17
Rent	1,633 00
Total	$138,291 25
Government grant for 1921	$6,082 40

THE PERLEY HOME FOR INCURABLES, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	45
Admitted	16
Births in Hospital	
Total number under treatment	61
Discharged	7
Died	7
Under treatment, 30th September, 1921	47
	61

Sex.

Male	23
Female	38
	61

Revenue.

From the Province of Ontario	$8,219 00
From the City of Ottawa	3,000 00
From the County of Carleton	
From other municipalities	
From patients themselves for maintenance and treatment	6,473 32
Subscriptions, donations and bequests	975 00
From other sources not enumerated	70 00
Income from property	1,673 27
Total	$20,410 59

Expenditures.

Butchers' meat	$1,294 62
Butter and eggs	869 07
Flour, bread and meal	748 81
Milk	982 90
Tea and coffee	400 46
Potatoes and other vegetables	190 40
Groceries and provisions not enumerated	1,404 20
Drugs and medicines	295 65
Medical and surgical appliances	
Surgical instruments	
Beer, wine and spirits	
Bedding, napery and general house furnishings	40 31
Brooms, brushes, mops, soap and cleaning appliances	121 28
Fuel	1,390 00
Light: gas, oil, and candles	326 73
Water supply	
Ice	
Salaries and wages	7,111 89
Taxes and insurance	489 04
Hay and straw	2,000 00
Contingencies	1,764 99
Repairs, ordinary	508 26
Printing, stationery, etc.	141 33
Clothing for patients	
Overdraft	78 92
Total	$20,158 86
Government grant for 1921	$10,353 00

GENERAL AND MARINE HOSPITAL OWEN SOUND.

The following summaries show the operations of the Hospital, during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	46
Admitted	824
Births in Hospital	121
Total number under treatment	991
Discharged	905
Died	51
Under treatment, 30th September, 1921	35
	991

GENERAL AND MARINE HOSPITAL, OWEN SOUND.—*Continued*

Sex.

Male	408
Female	583
	991

Revenue.

From the Province of Ontario	$1,766 15
From the Town of Owen Sound	1,000 00
From the County of Grey	2,000 00
From other municipalities	50 00
From patients themselves for maintenance and treatment	27,851 82
From subscriptions, bequests and donations of private persons	3,058 05
From all other sources not enumerated	88 00
Total	$35,814 02

Expenditures.

Butchers' meat and fish	$2,394 42
Butter and eggs	513 78
Flour, bread and meal	1,330 75
Milk	1,591 63
Tea and coffee	
Potatoes and other vegetables	296 05
Groceries and provisions not enumerated	5,774 72
Drugs and medicines	637 01
Medical and surgical appliances	1,746 27
Beer, wine and spirits	120 25
Bedding, napery and general house furnishings	341 14
Brooms, brushes, mops, soap and cleaning appliances	63 35
Fuel	4,064 70
Electric light, gas, oil	783 65
Ice	69 00
Salaries and wages	9,116 05
Insurance and interest	151 00
Contingencies	289 68
Repairs, ordinary	2,138 27
Printing, stationery, etc.	160 40
Freight and cartage	206 74
X-Ray expenses	1,865 10
Disbursements at hospital	165 00
Total	$33,818 96
Government grant for 1921	$2,094 30

GENERAL HOSPITAL PARRY SOUND.

The following summaries show the operations of the Hospital, during the o fficial year.

Movements of Patients.

Number under treatment, 1st October, 1920	15
Admitted	274
Number of births in Hospital	10
Total number under treatment	299
Discharged	285
Died	10
Under treatment, 30th September, 1921	4
	299

Sex.

Male	210
Female	89
	299

Revenue.

From the Province of Ontario	$1,184 22
From Town of Parry Sound	
From paying patients	10,171 23
Subscriptions, donations, etc.	379 94
Other sources	
Total	$11,735 39

Expenditures.

Butchers' meat	$837 01
Butter and eggs	502 14
Flour, bread and meal	322 29
Milk	125 50
Tea and coffee	165 64
Potatoes and other vegetables	90 75
Groceries and provisions not enumerated	1,336 90
Drugs and medicines	2,669 53
Medical and surgical appliances	
Surgical instruments	
Beer, wine and spirits	152 85
Bedding, napery and general house furnishings	225 67
Brooms, brushes, mops, soap and cleaning	58 26
Fuel	1,958 00
Electric light, gas, oil	132 61
Water supply	61 22
Ice supply	
Printing, stationery, etc.	192 96
Salaries and wages	2,112 31
Contingencies	
Repairs, ordinary	681 75
Taxes and insurance	60 00
Hay and straw	50 00
Clothing for patients	
Total	$11,735 39
Government grant for 1921	$1,496 30

ST. JOSEPH'S GENERAL HOSPITAL, PARRY SOUND

The following summaries show the operations of the Hospital during the official year

Movements of Patients.

Number under treatment, 1st October, 1920	7
Admitted	280
Births in Hospital	61
Total number under treatment	348
Discharged	326
Died	9
Under treatment, 30th September, 1921	13
	348

Sex.

Male	142
Female	206
	348

Revenue.

From the Province of Ontario	$1,801 63
From Town of Parry Sound	
From other municipalities of the Province	
From patients themselves for maintenance and treatment	8,455 79
From subscriptions, donations and bequests from private individuals	100 00
From all other sources	20 00
Total	$10,377 42

Expenditures.

Butchers' meat	$870 99
Butter and eggs	535 35
Flour, bread and meal	367 23
Milk	211 77
Tea and coffee	90 50
Potatoes and other vegetables	248 20
Groceries and provisions not enumerated	1,093 10
Drugs and medicines	745 21
Surgical instruments and appliances	
Beer, wine and spirits	
Bedding, napery and general house furnishings	1,011 72
Brooms, brushes, mops, soap and cleaning appliances	19 05
Fuel	1,632 44
Electric light, gas, oil, candles	136 22
Water supply	44 63
Salaries and wages	1,366 65
Ice supply	
Contingencies	257 29
Repairs, ordinary	859 54
Printing and postage	99 41
Hay and straw	243 98
Taxes and insurance	550 00
Clothing for patients	
Total	$10,383 28
Government grant for 1921	$1,890 50

GENERAL HOSPITAL, PEMBROKE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	53
Admitted	1,019
Births in Hospital	63
Total number under treatment	1,135
Discharged	1,044
Died	43
Under treatment, 30th September, 1921	48
	1,135

Sex.

Male	539
Female	596
	1,135

Revenue.

From the Province of Ontario	$4,656 11
From the County of Renfrew	2,282 92
From Town of Pembroke	3,000 00
From other municipalities	
From patients themselves	20,055 51
From subscriptions, bequests and donations of private individuals	$253 00
From all other sources	136 10
Total	$30,383 64

Expenditures.

Butchers' meat	$1,591 64
Butter and eggs	797 09
Flour, bread and meal	1,153 32
Milk	184 55
Tea and coffee	188 70
Potatoes and other vegetables	721 94
Groceries and provisions not enumerated	2,409 22
Surgical instruments	
Drugs and medicines	728 58
Medical and surgical appliances	
Beer, wine and spirits	362 66
Bedding, napery and general house furnishings	4,565 55
Brooms, brushes, mops, soap and cleaning appliances	126 60
Fuel	2,624 14
Electric light, gas, oil and candles	776 27

GENERAL HOSPITAL, PEMBROKE—*Continued.*

Water	$100 00
Hay and straw	311 13
Clothing for patients, including boots and shoes	779 34
Ice	
Salaries and wages	3,694 90
Contingencies	148 62
Repairs, ordinary and additions	7,747 15
Taxes and insurance	146 65
Printing, stationery, etc.	$117 77
Hardware	
X-Ray	
Telephone	
Interest and exchange	
Farm and grounds	1,056 90
Total	$30,332 67
Government grant for 1921	$7,110 70

COTTAGE HOSPITAL PEMBROKE.

The following summaries show the operations of the Hospital, during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	21
Admitted	465
Births in Hospital	45
Total number under treatment	531
Discharged	499
Died	16
Under treatment, 30th September, 1921	16
	531

Sex.

Male	250
Female	281
	531

Revenue.

From the Province of Ontario	$1,274 24
From the County of Renfrew	1,000 00
From Town of Pembroke	636 06
From patients themselves for maintenance and treatment	12,686 38
From endowments, investments, etc.	325 00
From subscriptions, donations and bequests from private individuals	93 50
From other sources	1,402 45
Total	$17,417 63

Expenditures.

Butchers' meat	$923 39
Butter and eggs	681 70
Flour, bread and meal	510 48
Milk	916 85
Tea and coffee	20 80
Potatoes and other vegetables	58 10
Groceries and provisions not enumerated	1,261 70
Drugs and medicines	1,050 62
Medical and surgical appliances	
Surgical instruments	
Beer, wine and spirits	38 70
Bedding, napery and general house furnishings	478 35
Brooms, brushes, mops, soap and cleaning appliances	6 00
Fuel	1,759 31
Electric light, gas, oil, and candles	401 23
Water supply	81 72
Salaries and wages	6,087 35
Taxes and insurance	571 34
Hay and straw	
Contingencies	1,054 83
Repairs, ordinary	685 13
Ice supply	
Printing, postage, etc.	215 40
Clothing for patients	
Total	$16,803 00
Government grant for 1921	$1,872 00

GENERAL HOSPITAL, PENETANGUISHENE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients

Number under treatment, 1st October, 1920	4
Admitted	134
Births in Hospital	29
Total number under treatment	167
Discharged	156
Died	9
Under treatment, 30th September, 1921	2
	167

GENERAL HOSPITAL, PENETANGUISHENE—*Continued.*

Sex.

Male	82
Female	85
	167

Revenue.

From the Province	$550 68
From the Town of Penetang	500 00
From the County of Simcoe	500 00
From other municipalities	
From patients themselves for maintenance and treatment	2,755 71
From subscriptions, donations and bequests from private individuals	1,135 30
From other sources	400 00
Total	$5,841 69

Expenditures.

Butchers' meat	$406 33
Butter, eggs and milk	75 77
Flour, bread and meal	117 51
Milk	126 58
Tea and coffee	18 60
Potatoes and other vegetables	113 68
Groceries and provisions not enumerated	820 57
Drugs and medicines	647 41
Medical and surgical appliances	
Beer, wine and spirits	20 85
Bedding, napery and general house furnishings	97 28
Brooms, brushes, mops, soap and cleaning appliances	5 10
Fuel	713 11
Light: gas, oil and candles	93 04
Salaries and wages	1,800 21
Taxes and insurance	67 50
Contingencies	133 10
Laundry, etc.	606 10
Ice	
Repairs, ordinary	79 82
Printing and postage	46 94
Water	21 00
Total	$6,110 50
Government grant for 1921	$571 00

THE NICHOLL'S HOSPITAL, PETERBOROUGH

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	55
Admitted	1,241
Births in Hospital	175
Total number under treatment	1,471
Discharged	1,331
Died	76
Under treatment, 30th September, 1921	64
	1,471

Sex.

Male	557
Female	914
	1,471

Revenue.

From the Province of Ontario	$2,129 19
From the City of Peterborough	8,550 00
From patients themselves for maintenance and treatment	39,974 65
From property belonging to Hospital, endowments, etc.	12,013 81
From subscriptions, donations and bequests from private individuals	177 50
Total	$62,845 15

Expenditures.

Butchers' meat	$3,402 65
Butter and eggs	1,010 08
Flour, bread and meal	1,409 25
Milk	2,169 07
Tea and coffee	383 70
Potatoes and other vegetables	1,654 11
Groceries and provisions not enumerated	4,270 79
Drugs and medicines	1,810 58
Surgical instruments and appliances	4,749 31
Beer, wine and spirits	241 60
Bedding, napery and general house furnishings	3,947 31
Brooms, brushes, mops, soap and cleaning appliances	237 41
Fuel	10,235 40
Electric light, gas, oil, candles	1,338 81
Water supply	
Clothing for patients	38 14
Ice	225 00
Salaries and wages	16,688 48
Taxes and insurance	518 11
Hay and straw	176 38
Contingencies	1,200 03
Printing, stationery, etc.	331 80
Repairs, ordinary	1,628 14
Total	$57,666 15
Government grant for 1921	$3,468 70

ST. JOSEPH'S HOSPITAL, PETERBOROUGH.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	32
Admitted	917
Births in Hospital	73
Total number under treatment.	1,022
Discharged	966
Died	25
Under treatment, 30th September, 1921	31
	1,022

Sex.

Male	426
Female	596
	1,022

Revenue.

From the Province of Ontario	$1,626 51
From the City of Peterborough	797 75
From patients themselves for maintenance and treatment	22,863 46
From subscriptions, donations and bequests from private individuals	
From all other sources	
Total	$25,287 72

Expenditures.

Butchers' meat	$1,032 54
Butter and eggs	1,021 02
Flour, bread and meal	537 13
Milk	916 19
Tea and coffee	176 26
Potatoes and other vegetables	636 54
Groceries and provisions not enumerated	1,787 13
Drugs and medicines	952 92
Medical and surgical appliances	2,043 24
Beer, wine and spirits	
Bedding, napery and general house furnishings	1,443 14
Brooms, brushes, mops, soap and cleaning appliances	197 03
Fuel	3,431 65
Electric light, gas, oil and power	644 35
Water supply	171 35
Hay and straw	
Clothing for sisters	
Salaries and wages	5,115 14
Printing, stationery, etc.	159 19
Contingencies	204 14
Taxes and insurance	
Repairs, ordinary	3,748 39
Ice supply	75 40
Surgical instruments	
Total	$24,292 75
Government grant for 1921	$2,975 00

CHARLOTTE ELEANOR ENGLEHART HOSPITAL, PETROLEA

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	22
Admitted	274
Number of births in Hospital	60
Total number under treatment	356
Discharged	309
Died	27
Under treatment, 30th September, 1921	20
	356

Sex.

Male	129
Female	227
	356

Revenue.

From the Province of Ontario	$1,644 22
From the Town of Petrolea	1,000 00
From the County of Lambton	1,500 00
From paying patients	10,578 08
Subscriptions, donations, etc.	1,029 63
From other sources	1,460 01
Overdraft 1921	1,425 61
Total	$18,637 55

Expenditures.

Butchers' meat and fish	$551 01
Butter and eggs	837 03
Flour, bread and meal	
Milk	76 88
Tea and coffee	
Potatoes and other vegetables	
Groceries and provisions not enumerated	2,248 16
Drugs and medicines	1,479 86

CHARLOTTE ELEANOR ENGLEHART HOSPITAL, PETROLEA—*Continued.*

Medical and surgical appliances			Contingencies	591	94
Beer, wine and spirits			Repairs, ordinary	305	32
Bedding, napery and general house furnishings	779	70	Laundry	820	71
Brooms, brushes, mops, soap and cleaning appliances	180	00	Printing, stationery and postage	151	48
Fuel	1,055	75	Ice	220	85
Electric light, gas, oil, candles	1,030	52	Taxes and insurance	232	75
Water supply	100	00	Grounds	1,173	33
Hay and straw	257	84	Bank Overdraft	1,132	22
Salaries and wages	5,312	20	Total	$18,537	55
			Government aid for 1921	$2,345	50

PRINCE EDWARD COUNTY HOSPITAL PICTON

The following summaries show the operations of the Hospital, during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	6
Admitted	256
Births in Hospital	28
Total under treatment	290
Discharged	282
Died	3
Under treatment, 30th September, 1921	5
	290

Sex.

Male	117
Female	173
	290

Revenue.

From the Province of Ontario	$712	37	
From the Town of Picton			
From County of Prince Edward	2,000	00	
From patients for maintenance and treatment	7,368	71	
From subscriptions, donations, and bequests from private individuals	3,122	30	
From all other sources	9,371	20	
Total	$22,574	58	

Expenditures.

Butchers' meat	$543	79	
Butter and eggs	361	52	
Flour, bread and meal	171	31	
Milk	236	80	
Tea and coffee			
Potatoes and other vegetables	16	50	
Groceries and provisions not enumerated	844	80	
Drugs and medicines	441	72	
Medical and surgical appliances			
Surgical instruments			
Beer, wine and spirits			
Bedding, napery and general house furnishings	1,401	22	
Brooms, brushes, mops, soap and cleaning appliances			
Fuel	891	29	
Light: gas, oil candles and water	195	81	
Ice supply			
Salaries and wages	3,406	50	
Stationery, printing, postage, etc.	156	18	
Contingencies	3,249	33	
Repairs, ordinary	268	25	
Laundry			
Taxes and insurance	172	60	
Hay and straw			
Repairs and Additons	10,483	64	
Total	$22,841	26	
Government grant for 1921	$938	50	

RAILWAY, MARINE AND GENERAL HOSPITAL, PORT ARTHUR

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	34
Admitted	754
Births in Hospital	102
Total number under treatment	890
Discharged	824
Died	42
Under treatment, 30th September, 1921	24
	890

RAILWAY, MARINE AND GENERAL HOSPITAL, PORT ARTHUR—*Continued.*

Sex.

Male	509
Female	381
	890

Revenue.

From the Province of Ontario	$3,328 98
From the City of Port Arthur	5,809 99
From patients themselves for maintenance and treatment	24,729 84
From subscriptions, donations and bequests from private individuals	1,490 00
From other sources	619 54
Total	$35,978 35

Expenditures

Butchers' meat	2,515 23
Butter and eggs	1,826 68
Flour, bread and meal	2,490 21
Milk	
Tea and coffee	315 49
Potatoes and other vegetables	377 75
Groceries and provisions not enumerated	1,928 96
Drugs and medicines	992 69
Surgical and medical appliances	1,385 92
Beer, wine and spirits	12 34
Bedding, napery and general house furnishings	401 92
Fuel	3,059 00
Brooms, brushes, mops, soap and cleaning appliances	581 39
Electric light, gas, oil, candles	706 91
Water supply	191 62
Ice	575 50
Salaries and wages	11,558 30
Taxes and insurance	519 20
Stationery, printing, etc.	347 03
Contingencies	500 27
Repairs, ordinary	1,668 36
Audit fee	200 00
Clothing for patients	
Other expenses	3,809 32
Total	$35,964 09
Government grant for 1921	$3,753 40

ST. JOSEPH'S HOSPITAL, PORT ARTHUR.

The following summaries show the operations of the Hospital during the official year

Movements of Patients.

Number under treatment, 1st October, 1920	40
Admitted	1,029
Births in Hospital	130
Total number under treatment	1,199
Discharged	1,107
Died	52
Under treatment, 30th September, 1921	40
	1,199

Sex.

Male	614
Female	585
	1,199

Revenue.

From the Province of Ontario	$3,729 80
From the City of Port Arthur	4,566 92
From patients themselves for maintenance and treatment	31,698 65
From subscriptions, donations and bequests from private individuals	931 65
From other sources	3,200 00
Income from property	475 00
Total	$44,602 02

Expenditures.

Butchers' meat and fish	$3,512 82
Butter and eggs	2,457 95
Flour, bread and meal	840 69
Milk	1,713 30
Tea and coffee	141 62
Potatoes and other vegetables	230 98
Groceries and provisions not enumerated	4,888 49
Drugs and medicines	1,421 52
Surgical and medical appliances	2,104 00
Beer, wine and spirits	53 00
Bedding, napery and general house furnishings	2,423 46
Fuel	12,000 00
Brooms, brushes, mops, soap and cleaning appliances	
Electric light, gas, oil and power	90 15
Water supply	149 16
Ice	393 24
Salaries and wages	5,040 40
Taxes and insurance	858 17
Stationery, printing, etc.	
Contingencies	1,202 53
Repairs, ordinary	1,623 39
Hay and straw	
Clothing for patients	
X-Ray machine	307 35
Insurance and interest	4,426 34
Total	$45,878 56
Government grant for 1921	$5,449 60

GENERAL HOSPITAL, PORT HOPE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	17
Admitted	328
Births in Hospital	64
Total number under treatment	409
Discharged	365
Died	31
Under treatment, 30th September, 1921	13
	409

Sex.

Male	170
Female	239
	409

Revenue.

From the Province of Ontario	$1,460 27
From City of Port Hope	
From County of Durham	750 00
From other municipalities	
From endowments, investments, etc.	776 47
From patients themselves for maintenance and treatment	11,257 77
From subscriptions, donations and bequests from private individuals	1,304 46
From other sources	59 87
Total	$15,608 84

Expenditures.

Butchers' meat	$873 64
Butter and eggs	482 67
Bread	339 35
Milk	121 32
Tea and coffee	36 24
Potatoes and other vegetables	201 54
Groceries and other provisions not enumerated	965 17
Drugs and medicines, medical and surgical appliances	463 85
Bedding, napery and general house furnishings	744 87
Brooms, brushes, mops, soap and cleaning appliances	124 95
Fuel	1,724 82
Light, gas, oil and candles	242 84
Salaries and wages	6,510 52
Insurance and taxes	29 50
Contingencies	2,135 47
Repairs, ordinary	155 51
Ice	56 90
Water	95 35
Printing, stationery, postage	249 30
Hay and straw	157 40
Beer, wine and spirits	78 62
Surgical instruments	749 29
Total	$16,539 12
Government grant for 1921	$2,258 50

VICTORIA GENERAL HOSPITAL, RENFREW.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	25
Admitted	465
Births in Hospital	62
Total number under treatment	552
Discharged	499
Died	29
Under treatment, 30th September, 1921	24
	552

Sex.

Male	227
Female	325
	552

Revenue.

From the Province of Ontario	$1,274 58
From the Town of Renfrew	6,000 00
From the County of Renfrew	1,081 02
From other municipalities	20 00
From patients for maintenance and treatment	14,044 34
From subscriptions, donations and bequests from private individuals	576 20
Total	$22,996 14

VICTORIA GENERAL HOSPITAL,RENFREW—Continued.

Expenditures.

Butchers' meat	$1,366	11
Butter and eggs	938	13
Flour bread and meal	551	39
Milk	872	92
Tea and coffee	307	75
Potatoes and other vegetables	15	69
Groceries and provisions not enumerated	1,960	65
Medical and surgical appliances	918	29
Surgical instruments	111	35
Drugs and medicines	1,647	40
Bedding, napery and general house furnishings	1,091	65
Fuel	$1,723	09
Electric light, gas, oil, candles	386	49
Water supply	24	50
Ice supply	105	25
Salaries and wages	6,464	95
Contingencies	803	37
Repairs, ordinary	503	42
Brooms, brushes and cleaning	252	34
Clothing for patients		
Beer, wine, and spirits	49	95
Taxes and insurance	29	64
Total	$20,124	24
Government grant for 1921	$1,875	50

GENERAL AND MARINE HOSPITAL, ST. CATHARINES.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	59
Admitted	1,181
Births in Hospital	307
Total number under treatment	1,547
Discharged	1,434
Died	55
Under treatment, 30th September, 1921	58
	1,547

Sex.

Male	587
Female	960
	1,547

Revenue.

From the Province of Ontario	$1,235	84
From the City of St. Catharines	7,500	00
From the County of Lincoln	2,295	50
From other municipalities		
From patients themselves for maintenance and treatment	40,129	80
From endowments, investments, or other property belonging to the Hospital	551	23
From subscriptions, bequests and donations of private persons	3,675	40
From all other sources not above enumerated	1,180	16
Total	$56,567	93

Expenditures.

Butchers' meat and fish	$5,317	20
Flour, bread and meal	2,698	61
Butter and eggs	1,482	75
Milk	3,849	90
Tea and coffee	119	90
Potatoes and other vegetables and fruit	940	07
Groceries and provisions not enumerated	5,797	70
Drugs and medicines	2,278	41
Medical and surgical appliances	175	35
Surgical instruments	2,332	06
Beer, wine and spirits	30	42
Bedding, napery and general house furnishings	2,888	52
Brooms, brushes, mops, soap and cleaning appliances	141	28
Fuel	4,076	23
Electric light, gas, oil, candles	1,404	53
Water supply	193	02
Ice	16,666	64
Salaries and wages	13,836	50
Taxes and insurance	1,599	73
Contingencies	1,295	57
Repairs, ordinary	3,768	51
Printing, stationery, etc.	591	65
Clothing for patients	83	20
Total	$56,567	93
Government grant for 1921	$3,038	10

AMASA WOOD HOSPITAL, ST. THOMAS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	24
Admitted	906
Births in the Hospital	176
Total number under treatment	1,106
Discharged	1,013
Died	68
Under treatment, 30th September, 1921	25
	1,106

Sex.

Male	457
Female	649
	1,106

Revenue.

From the Province of Ontario	$2,464 97
From the City of St. Thomas	8,500 00
From paying patients themselves	30,795 16
Other sources	282 22
Total	$42,042 35

Expenditures.

Butchers' meat	$1,466 46
Butter and eggs	1,786 84
Flour, bread and meal	697 68
Milk	1,403 29
Tea and coffee	308 97
Potatoes and other vegetables	635 02
Groceries and other provisions not enumerated	2,866 03
Drugs and medicines	3,677 78
Medical and surgical appliances	345 15
Surgical instruments	180 75
Beer, wine and spirits	216 98
Bedding, etc.	618 50
Brooms, brushes, mops, soap and cleaning appliances and laundry	5,216 18
Fuel	2,594 69
Electric light, gas, oil, candles	1,197 30
Water supply	182 35
Ice	241 13
Ambulance expenses	103 10
Salaries and wages	9,219 87
Taxes and insurance	312 79
Contingencies	832 91
Repairs, ordinary	735 13
Printing, stationery, etc.	247 50
Bank overdraft Oct. 1st, 1920.	4,978 70
Total	$40,065 10
Government grant for 1921	$2,936 90

GENERAL HOSPITAL, SARNIA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	35
Admitted	673
Births in Hospital	58
Total number under treatment	766
Discharged	675
Died	52
Under treatment, 30th September, 1921	39
	766

Sex.

Male	343
Female	423
	766

Revenue.

From the Province of Ontario	$741,60
From the Town of Sarnia	6,000 00
From the County of Lambton	1,500 00
From patients themselves for maintenance and treatment	29,261 74
From property belonging to the Hospital	535 10
From subscriptions, donations, and bequests from private individuals	
From all other sources	
Total	$38,038 44

Expenditures.

Butchers' meat	$2,952 53
Butter and eggs	1,976 73
Flour, bread and meal	781 31
Milk	970 62
Tea and coffee	
Potatoes and other vegetables	671 72
Groceries and provisions not enumerated	2,509 73
Drugs and medicines	544 83
Surgical instruments and appliances	2,503 96
Beer, wine and spirits	141,65
Bedding, napery and general house furnishings	1,383 34
Fuel	4,078 26

GENERAL HOSPITAL, SARNIA—*Continued.*

Electric light, gas, oil and candles	$900 14
Laundry, etc.	4,234 81
Ice	455 84
Salaries and wages	11,318 24
Insurance	1,853 40
Contingencies	426 71
Repairs, ordinary	4,319 52
Stationery and printing	$330 85
Nurses' furnishings	347 92
Nurses' home	272 81
Interest and exchange	221 02
Total	$43,195 94
Government grant for 1921	$1,455 50

GENERAL HOSPITAL, SAULT STE. MARIE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	51
Admitted	907
Births in Hospital	81
Total number under treatment	1,039
Discharged	962
Died	39
Under treatment, 30th September, 1921	38
	1,039

Sex.

Male	595
Female	444
	1,039

Revenue.

From the Province of Ontario	$3,369 06
From the City of Sault Ste. Marie	675 15
From other municipalities	
From patients themselves for maintenance and treatment	35,259 66
Subscriptions, donations and bequests of private individuals	2,101 48
From other sources not enumerated	465 49
Total	$41,870 84

Expenditures.

Butchers' meat	$2,750 16
Butter and eggs	1,932 74
Flour, bread and meal	1,100 93
Milk	1,861 35
Tea and coffee	221 94
Potatoes, vegetables and fruit	1,171 44
Groceries and provisions not enumerated	1,941 99
Drugs and medicines	964 34
Medical and surgical appliances	1,974 02
Beer, wine and spirits	175 25
Bedding, napery and general house furnishings	2,404 19
Brooms, brushes, mops, soap and cleaning appliances	1,394 68
Fuel	5,713 06
Electric light, gas, oil and candles	456 40
Water suppl	287 18
Clothing for patients, including boots and shoes	1,176 94
Ice	294 29
Salaries and wages	7,049 20
Contingencies	811 69
Repairs, ordinary	1,852 43
Taxes and insurance	564 91
Printing, stationery, etc.	546 38
Hay and straw	182 42
Total	$36,827 93
Government grant for 1921	$3,304 30

ROYAL VICTORIA HOSPITAL, SAULT STE. MARIE.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	14
Admitted	583
Births in Hospital	33
Total number under treatment	630
Discharged	581
Died	27
Under treatment, 30th September, 1921	22
	630

Sex.

Male	365
Female	265
	630

Revenue.

From the Province of Ontario.	$1,328 99
From the City of Sault Ste. Marie	230 50
From paying patients themselves	14,029 35

ROYAL VICTORIA HOSPITAL, SAULT STE. MARIE—*Continued.*

Other sources	$4,316 52
Income from endowments and property	
Total	$19,905 36

Expenditures.

Butchers' meat	$1,187 34
Butter and eggs	1,135 85
Flour, bread and meal	360 25
Milk	188 65
Tea and coffee	119 08
Potatoes and other vegetables	296 43
Groceries and other provisions not enumerated	1,750 99
Drugs and medicines	855 56
Medical and surgical appliances	906 37
Surgical instruments	$122 80
Beer, wine and spirits	55 25
Bedding, etc.	1,013 61
Brooms, brushes, mops, soap and cleaning appliances	318 23
Fuel	923 05
Electric light, gas, oil, candles	760 77
Water supply	96 59
Ice	61 00
Ambulance expenses	
Salaries and wages	6,641 73
Taxes and insurance	243 00
Contingencies	465 19
Repairs, ordinary	588 46
Printing, stationery, etc.	170 08
Rent and telephone	
Hay and straw	91 41
Total	$18,360 69
Government grant for 1921	$3,366 50

PUBLIC HOSPITAL, SMITH'S FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	24
Admitted	562
Births in Hospital	72
Total number under treatment	658
Discharged	585
Died	35
Under treatment, 30th September, 1921	38
	658

Sex.

Male	268
Female	390
	658

Revenue.

From the Province of Ontario	$2,437 96
From the Town of Smith's Falls	1,200 00
From patients themselves for maintenance and treatment	22,258 23
From subscriptions, donations, and bequests from private individuals	4,216 04
From other sources	450 00
From endowments, investments, etc.	1,596 43
Total	$32,158 66

Expenditures.

Butchers' meat	$1,897 89
Butter and eggs	1,816 35
Flour, bread and meal	608 04
Milk	753 32
Potatoes and other vegetables	1,696 99
Groceries and provisions not enumerated	2,549 42
Tea and coffee	174 25
Drugs and medicines	1,548 84
Medical and surgical appliances	1,989 86
Surgical instruments	98 68
Bedding, napery and general house furnishings	1,893 41
Brooms, brushes, mops, soap and cleaning appliances and laundrying	2,273 60
Fuel	3,307 82
Light: gas, oil and power	226 98
Ice	87 50
Salaries and wages	6,676 32
Taxes and insurance	288 46
Contingencies	616 22
Repairs, ordinary	955 52
Printing, stationery, etc.	246 28
Hay and straw	621 93
Beer, wine and spirits	379 25
Water supply	
Total	$30,706 93
Government grant for 1921	$4,156 20

ST. FRANCES' HOSPITAL, SMITH'S FALLS.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	24
Admitted	467
Births in Hospital	65
Total number under treatment	556
Discharged	485
Died	29
Under treatment, 30th September, 1921	42
	556

Sex.

Male	226
Female	330
	556

Revenue.

From the Province of Ontario	$1,624 33
From the Town of Smith's Falls for patients' maintenance	800 00
From the County of Lanark	
From paying patients themselves	17,710 97
From subscriptions, bequests, and donations of private individuals	833 95
From other sources	2,534 93
Total	$23,504 18

Expenditures.

Butchers' meat	$2,978 11
Butter and eggs	1,342 94
Flour, bread and meal	1,615 58
Milk	1,107 71
Tea and coffee	329 53
Potatoes and other vegetables	432 78
Groceries and provisions not enumerated	1,616 61
Drugs and medicines	532 65
Medical and surgical appliances	561 90
Surgical instruments	
Alcohol	69 11
Bedding, napery and general house furnishings	1,767 74
Brooms, brushes, mops, soap and cleaning appliances	220 70
Fuel	2,539 02
Electric light, motor service	559 76
Water	25 00
Ice	95 00
Salaries and wages	1,421 61
Taxes, insurance and interest	662 72
Stationery, postage, etc.	179 19
Repairs, ordinary	3,682 06
Contingencies	484 50
Clothing, including boots	1,171 99
Total	$23,396 21
Government aid for 1921	$1,825 50

GENERAL HOSPITAL, STRATFORD.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	32
Admitted	793
Number of births during the year	135
Total number under treatment	960
Discharged	856
Died	63
Under treatment, 30th September, 1921	41
	960

Sex.

Male	372
Female	588
	960

Revenue.

Received from the Province of Ontario	$1,214 69
From the City of Stratford	4,000 00
From the County of Perth	1,500 00
From other municipalities of the Province	360 00
From paying patients	36,507 05
Income from endowments, investments, etc.	70 73
Subscriptions, donations, etc.	3,709 50
From other sources	922 65
Total	$48,284 62

Expenditures.

Butchers' meat	$2,524 22
Butter and eggs	1,890 32
Flour, bread and meal	837 26
Milk	1,994 96
Tea and coffee	349 45
Potatoes and other vegetables	829 72

GENERAL HOSPITAL, STRATFORD—*Continued.*

Groceries and provisions not enumerated	3,315	53	Ice	365	29
Drugs and medicines	743	71	Salaries and wages	11,517	04
Medical and surgical appliances	3,585	07	Taxes and insurance	393	22
Surgical instruments	34	99	Contingencies	1,501	31
Beer, wine and spirits	396	35	Repairs, ordinary	3,169	79
Bedding, napery and general house furnishings	290	34	Postage, etc.	209	79
Brooms, brushes, mops, etc.	857	30	Poultry and grain for same	284	98
Fuel	4,485	52	X-Ray supplies, etc.	830	68
Electric light, gas, oil, candles	1,707	92	Total	$42,363	10
Water supply	248	37	Government grant for 1921	$2,168	40

GENERAL HOSPITAL, STRATHROY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	22
Admitted	233
Number of births in the institution during the year	22
Total number under treatment	277
Discharged	229
Died	27
Under treatment, 30th September, 1921	21
	277

Sex.

Male	121
Female	156
	277

Revenue.

Received from the Province of Ontario	$1,431	99	
From the Town of Strathroy			
From the County of Middlesex	1,605	50	
From paying patients	14,538	53	
Subscriptions, donations, etc.	25	00	
From source not enumerated	298	50	
From Dominion Government			
Total	$17,899	52	

Expenditures.

Butchers' meat	$1,116	30	Ice	61	91
Butter and eggs	992	52	Salaries and wages	4,090	74
Flour, bread and meal	495	82	Contingencies	523	81
Milk	685	05	Repairs, ordinary	770	95
Tea and coffee	288	96	Taxes and insurance	8	50
Potatoes and other vegetables	537	25	Printing, stationery, etc.	79	81
Groceries and provisions not enumerated	1,155	80	Surgical instruments		
Drugs and medicines	704	57	Hay and straw	71	35
Medical and surgical appliances	304	31	Clothing for patients		
Beer, wine and spirits	124	20	Total	$14,990	91
Bedding, napery and general house furnishings	621	62	Government grant for 1921	$2,226	50
Brooms, brushes, mops, etc.	334	21			
Fuel	1,826	32			
Electric light, gas, oil, candles	196	91			
Water supply					

ST. JOSEPH'S HOSPITAL, SUDBURY.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	87
Number admitted	1,935
Births in Hospital	70
Total number under treatment	2,092
Discharged	1,925
Died	86
Remaining under treatment on the 30th September, 1921	81
	2,092

ST. JOSEPH'S HOSPITAL, SUDBURY—*Continued.*

Sex.

Male	1,297
Female	795
	2,092

Revenue.

From the Province of Ontario	$10,108 67
From paying patients themselves	58,079 81
Subscriptions, donations and bequests	1,139 89
Town of Sudbury	1,241 00
From all other sources not above enumerated	4,066 58
Total	$74,635 95

Expenditures.

Butchers' meat	3,362 12
Butter and eggs	3,385 69
Flour, bread and meal	2,609 71
Milk	2,286 32
Tea and coffee	1,501 85
Potatoes and other vegetables	1,643 40
Groceries and provisions not enumerated	$7,396 84
Drugs and medicines	3,422 54
Medical and surgical appliances	3,422 54
Beer, wine and spirits	399 86
Bedding, napery and general house furnishings	4,610 33
Brooms, brushes, mops, soap and cleaning appliances	841 33
Fuel	8,406 02
Electric light, gas, and oil	2,658 50
Hay and straw	325 40
Clothing for patients	918 76
Ice	
Salaries and wages	7,708 87
Contingencies	170 59
Repairs, ordinary	3,222 54
Taxes and insurance	
Printing and stationery	393 50
Surgical instruments	646 39
Coffins and funerals	20 00
Water supply	975 44
Total	$60 328 54
Government grant for 1921	$12,453 70

GENERAL HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment in all departments of the Hospital, 1st October, 1921	527
Admitted	10,938
Births in the Hospital	1,337
Total number under treatment	12,802
Discharges, including infants	11,666
Died	588
Under treatment, 30th September, 1921	548
Total	12,802

Sex.

Male	5,349
Female	7,453
	12,802

Revenue.

From the Province of Ontario	$91,500 25
From the City of Toronto, in payment of patients' maintenance	135,477 95
From the County of York in payment of patients' maintenance	
From other municipalities of the province	
From paying patients themselves	610,002 63
Income from property belonging to the Hospital Trust	75,528 64
Subscriptions, donations, and bequests of private individuals	$5,846 32
From all other sources not above enumerated	18,895 32
From Dominion Government	
Deficit, 30th Sept., 1921	106,680 46
Total	$1,043,931 57

Expenditures.

Butchers' meat, poultry and fish	$59,391 14
Butter, eggs and cheese	37,898 16
Flour, bread and meal	16,287 46
Milk and cream	39,786 56
Tea, coffee and cocoa	7,790 06
Potatoes and other vegetables	15,300 85
Groceries and provisions not enumerated and fruit	45,750 08
Drugs and medicines	38,797 98
Medical and surgical appliances, bandages, etc.	42,996 92
Surgical instruments, ordinary, etc.	13,521 19
Beer, wine and spirits	3,288 79
Bedding, napery and general house furnishings, patients' clothing	45,402 99
Laundry, brooms, brushes, mops, soap and cleaning appliances	15,095 94
Fuel, power-house and wages	85,487 96
Light: Gas, oil, and electric	17,995 12
Water supply	8,854 25

GENERAL HOSPITAL, TORONTO—*Continued.*

Nurses' uniforms and medals		$1,604 31	
Gardens and grounds		173 31	
Salaries and wages		358,911 22	
Contingencies, miscellaneous expenses		28,772 01	
Repairs, ordinary		36,414 07	
Telephones		4,071 79	
Interest on debts and insurance			
Printing, postage, stationery, annual report, advertising		10,560 34	
Taxes and insurance		4,634 64	
Nurses' home			
Rent of Land		3,102 55	
Depreciation of buildings and equipment		50,180 77	
Total			$992,070 46
Government grant for 1921			$68,344 90

GRACE HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment in the Hospital, 1st October, 1920	99	
Admitted	2,577	
Births in Hospital	443	
Total number under treatment		3,119
Discharges, including infants	2,884	
Died	107	
Under treatment, 30th September, 1921	128	
		3,119

Sex.

Male	1,134	
Female	1,985	
		3,119

Revenue.

From the Government of Ontario	$10,892 00	
From the City of Toronto in payment of patients' maintenance or as a grant	30,927 01	
From the County of York	1,642 00	
From other municipalities	414 00	
From paying patients themselves	101,459 39	
Income from endowments, etc.	2,715 21	
Subscriptions, donations and bequests of private individuals	6,711 20	
From all sources not above enumerated		
Debit balance	19,490 16	
Total		$174,250 97

Expenditures.

Butchers' meat	$10,594 09	
Butter and eggs	5,614 39	
Flour, bread and meal	2,824 28	
Milk	6,147 97	
Tea and coffee	1,386 31	
Potatoes and other vegetables	3,274 98	
Groceries and other provisions not enumerated	6,818 34	
Drugs and medicines	6,858 53	
Medical and surgical appliances	15,467 91	
Surgical instruments	1,980 01	
Beer, wine and spirits	96 32	
Bedding, napery and general house furnishings	9,974 52	
Brooms, brushes, mops, soap and cleaning appliances	4,283 12	
Fuel	12,155 32	
Light: Electric, oil and candles	2,453 42	
Water supply	1,055 14	
Ice	1,271 91	
Salaries and wages	38,222 35	
Taxes and insurance	333 00	
Contingencies	11,573 60	
Repairs, ordinary	7,211 27	
Advertising, stationery, etc.	2,216 50	
Clothing for patients	652 47	
Overdraft, 1920	19,093 10	
Interest on mortgage	2,692 12	
Total		$174,250 97
Government grant for 1921		$11,006 60

HOSPITAL FOR SICK CHILDREN, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Under treatment, 1st October, 1920	262	
Admitted	5,015	
Total number under treatment		5,277
Discharged	4,478	
Died	558	
Under treatment, 30th September, 1921	241	
		5,277

Sex.

Male	2,902	
Female	2,375	
		5,277

Revenue.

From the Province of Ontario	$42,608 53	
From the City of Toronto	82,201 09	
From municipalities	12,918 50	
From patients themselves for maintenance and treatment	73,972 33	
From property belonging to Hospital	1,166 04	

HOSPITAL FOR SICK CHILDREN TORONTO—*Continued.*

From subscriptions, donations and bequests from private individuals	$22,721 89
From all other sources not enumerated	3,375 48
Total	$238,963 86

Expenditures.

Butchers' meat, game and fish	$14,815 37
Butter and eggs	9,398 83
Flour, bread and meal	4,974 70
Milk	10,806 80
Tea and coffee	985 56
Potatoes and other vegetables	4,320 41
Groceries and provisions not enumerated	11,324 19
Drugs and medicines	
Medical and surgical appliances and surgical instruments	22,011 58
Bedding, napery and general house furnishings	$12,057 50
Brooms, brushes, mops, soap and cleaning appliances	9,912 83
Fuel	31,674 42
Light: Electric, gas, oil, candles	8,472 48
Water supply	5,808 77
Clothing for patients, including boots, shoes and linen	5,206 79
Ice	
Salaries and wages	178,105 67
Insurance and taxes	1,411 61
Contingencies	15,011 49
Repairs, ordinary	22,214 34
Printing, stationery, etc.	11,214 00
Telephones and electricity	
X-ray and photos	
Interest	
Refunds to pay patients	
Total	$379,727 34
Government grant for 1921	$38 427 60

THE ORTHOPEDIC HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	23
Admitted	438
Total number under treatment	461
Discharges	435
Died	2
Under treatment, 30th September, 1921	24
	461

Sex.

Male	212
Female	249
	461

Revenue.

From the Government of Ontario	$734 16
Income from endowments, etc., or other property belonging to the Hospital	79 25
From paying patients themselves	22,273 67
Subscriptions, donations and bequests of private individuals	2,979 39
From all other sources not above enumerated	1,046 31
Total	$26,112 78

Expenditures.

Butchers' meat	$2,398 82
Butter and eggs	1,578 24
Flour, bread and meal	369 25
Milk	885 60
Tea and coffee	152 30
Potatoes and other vegetables	653 35
Groceries and provisions not enumerated	2,074 54
Drugs and medicines	345 61
Medical and surgical appliances, surgical instruments	964 16
Bedding, napery and general house furnishings	668 10
Brooms, brushes, mops, soap and cleaning appliances	1,065 98
Fuel	1,834 03
Electric light, gas, oil and candles	716 92
Water supply	245 57
Ice	138 90
Salaries and wages	11,425 62
Taxes and insurance	62 45
Repairs, ordinary	2,335 06
Gymnasium and sundries	
Sundries and material	
Clothing for patients	
Contingencies	4,059 18
Interest on debt	
Beer, wine and spirits	135 35
Printing and postage	1,246 52
Total	$33,355 55
Government grant for 1921	$890 10

ST. JOHN'S HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	34
Admitted	931
Number of births	2
Total number under treatment	967
Discharged	915
Died	18
Under treatment, 30th September, 1921	34
	967

Sex.

Male	78
Female	889
	967

Revenue.

From the Province of Ontario	$4,092 93
From the City of Toronto	6,008 75
From other municipalities	154 50
From patients themselves for maintenance and treatment	55,781 40
From subscriptions, donations and bequests from private individuals	3,446 23
From other sources	264 15
Total	$69,747 96

Expenditures.

Butchers' meat	$5,713 90
Butter and eggs	3,555 77
Bread	1,616 14
Milk	3,631 62
Tea and coffee	756 41
Potatoes and other vegetables	3,109 51
Groceries and provisions not enumerated	3,519 11
Drugs and medicines	1,313 58
Beer, wine and spirits	87 60
Bedding, napery and general house furnishings	5,057 14
Brooms, brushes, mops, soap and cleaning appliances	619 89
Fuel	5,109 75
Electric light, gas, oil, candles	3,165 10
Salaries and wages	15,175 45
Insurance and taxes	271 17
Contingencies	1,146 99
Repairs, ordinary and additions	3,785 22
Ice supply	538 79
Printing, stationery, etc.	748 30
Water supply	126 43
Medical and surgical appliances	2,811 55
Surgical instruments	3 28
Total	$61 862 70
Government grant for 1921	$5,862 90

ST. MICHAEL'S HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	232
Admitted	4,842
Births in Hospital	452
Total number under treatment	5,526
Discharged	4,962
Died	288
Under treatment, 30th September, 1921	276
	5,526

Sex.

Male	2,617
Female	2,909
	5,526

Revenue.

From the Government of Ontario	$37,141 70
From the City of Toronto in payment of patients' maintenance	68,158 10
From the County of York	1,453 25
From other municipalities	
From paying patients themselves	142,154 65
Subscriptions, donations and bequests of private individuals	112 30
From all other sources not above enumerated	1,549 94
Total	$250,569 94

ST. MICHAEL'S HOSPITAL, TORONTO.—*Continued*

Expenditure.

Butchers' meat, poultry and fish	$18,705 78
Butter and eggs	14,793 32
Flour, bread and meal	4,838 13
Milk	14,896 82
Tea and coffee	6,347 50
Potatoes, other vegetables and fruit	9,783 92
Groceries and provisions not enumerated	13,268 86
Drugs, medicines and XRay, etc.	10,751 88
Medical and surgical appliances	11,314 56
Surgical instruments	2,257 48
Beer, wine and spirits	1,452 72
Bedding, napery and general house furnishings	5,228 11
Brooms, brushes, mops, soap and cleaning appliances	$2,597 03
Fuel	20,530 63
Electric light, gas, oil, candles	7,286 31
Water supply	1,919 30
Salaries and wages	95,651 63
Taxes and insurance	2,402 19
Contingencies	
Repairs, ordinary	6,959 24
Telephone service	
Advertising, printing, stationery, etc.	2,345 80
Clothing, for patients, including boots and shoes	
Interest	6,377 47
Nurses' uniforms	
Depreciation	21,880 00
Total	$281,598 68

Government grant for 1921 .... $29,614 20

SALVATION ARMY WOMAN'S HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	60
Number admitted	428
Births in Hospital	400
Total number under treatment	888
Discharged	836
Died	34
Under treatment, 30th September, 1921	18
	888

Sex.

Male	242
Female	646
	888

Revenue.

From the Province of Ontario	$3,159 81
From the City of Toronto	
From the County of York	
From other municipalities of the Province	
From paying patients	17,488 48
From property belonging to the Hospital	
From subscriptions, bequests and donations from private individuals	102 05
From other sources not enumerated	2,167 50
Total	$22,917 84

Expenditures.

Butchers' meat	$805 88
Butter and eggs	546 00
Flour, bread and meal	729 22
Milk	758 98
Tea and coffee	154 86
Potatoes and other vegetables	98 44
Groceries and provisions not enumerated	1,231 80
Drugs, medicines and medical and surgical appliances	908 46
Bedding, napery and general house furnishings	1,056 54
Brooms, brushes, mops, soap and cleaning appliances	121 00
Fuel	778 50
Electric light, gas, oil, etc.	668 44
Water supply	74 56
Ice supply	42 00
Salaries and wages	6,545 50
Contingencies	1,975 28
Printing, stationery, etc.	148 19
Repairs, ordinary	126 30
Surgical instruments	
Coffins and Furnerals	70 00
Clothing for patients	42 57
Total	$16,882 52

Government grant for 1921 .... $6,147 90

TORONTO WESTERN HOSPITAL

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	142
Admitted	3,697
Births in Hospital	466
Total number under treatment	4,305
Discharged	3,924
Died	204
Under treatment, 30th September, 1921	177
	4,305

Sex.

Male	1,857
Female	2,448
	4,305

Revenue.

From the Province of Ontario	$17,693 39
From the City of Toronto	49,083 65
From the patients for maintenance and treatment	128,269 99
From subscriptions, donations and bequests from private individuals	975 00
From other sources	14,860 61
From other municipalities	2,378 00
Total	$213,260 64

Expenditures.

Butchers' meat	$14,028 55
Butter and eggs	9,207 76
Flour, bread and meal	3,013 66
Milk	8,267 25
Tea and coffee	1,123 09
Potatoes and other vegetables	6,658 53
Groceries and provisions not enumerated	8,136 54
Drugs and medicines	9,197 24
Medical and surgical appliances and instruments	17,656 26
Telephones	662 09
Beer, wine and spirits	1,711 38
Bedding, napery and general house furnishings	6,494 00
Brooms, brushes, mops, soap and cleaning appliances	3,152 96
Fuel	13,826 74
Light: Gas, oil and candles	4,114 41
Water	1,763 15
Ice supply	1,638 00
Salaries and wages	82,551 62
Taxes and insurance	1,902 28
Contingencies—interest	9,880 87
Repairs, ordinary	5,554 15
Clothing for patients	1,359 01
Printing, postage, etc.	3,947 62
Bad debts	1,200 00
Total	$217,047 16
Government grant for 1921	$16,169 20

THE WELLESLEY HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	86
Admitted	2,005
Births in Hospital	271
Total number under treatment	2,362
Discharged	2,227
Died	47
Under treatment, 30th September, 1921	88
	2,362

Sex.

Male	545
Female	1,817
	2,362

Revenue.

From the Province of Ontario	$69 40
From the City of Toronto	92 50
From the County of York	
From other municipalities of the Province	
From paying patients	207,731 07
Subscriptions, donations, etc.	
Other sources	
Total	$207,892 97

Expenditures.

Butchers' meat and fish	$24,936 03
Butter and eggs	2,218 61
Flour, bread and meal	2,815 38
Milk	8,414 24
Tea and coffee	1,869 26
Potatoes and other vegetables	6,324 34

THE WELLESLEY HOSPITAL, TORONTO—*Continued.*

Groceries and provisions not enumerated	$16,505 98
Drugs and medicines	2,534 17
Medical and surgical appliances and instruments	14,719 29
Beer, wine and spirits	387 40
Bedding, napery and general furnishings	2,646 53
Brooms, brushes, mops, soap and cleaning appliances	2,151 96
Fuel, electric light, gas, oil and candles	17,642 26
Water supply	1,328 91
Salaries and wages	$42,044 78
Taxes, interest and insurance	17,163 32
Contingencies	31,040 62
Repairs, ordinary	11,273 50
Nurses' home	
Telephone, interest and discount	4,478 62
Printing, stationery, etc	3,027 00
Total	$213,522 20
Government aid for 1921	$112 50

TORONTO HOSPITAL FOR INCURABLES

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	217
Admitted	98
Births in Hospital	
Total number under treatment	315
Discharged	24
Died	67
Under treatment, 30th September, 1921	224
	315

Sex.

Male	154
Female	161
	315

Revenue.

From the Province of Ontario	$40,169 50
From the City of Toronto	87,422 75
From the patients for maintenance and treatment	24,523 77
From subscriptions, donations and bequests from private individuals	6,743 50
From other sources	2,699 05
From other municipalities	3,806 75
From investments	4,226 34
Overdraft 1921	6,870 83
Total	$176,462 49

Expenditures.

Butchers' meat	$10,367 90
Butter and eggs	11,000 52
Flour, bread and meal	4,468 38
Milk	6,524 47
Tea and coffee	1,410 22
Potatoes and other vegetables	4,333 18
Groceries and provisions not enumerated	10,920 65
Drugs and medicines	
Medical and surgical appliances and instruments	5,254 07
Beer, wine and spirits	227 30
Bedding, napery and general house furnishings	7,386 94
Brooms, brushes, mops, soap and cleaning appliances	4,552 34
Fuel	18,847 52
Light: Gas, oil and candles	1,712 82
Water	913 70
Ice supply	931 60
Salaries and wages	48,243 97
Taxes and insurance	834 44
Contingencies—interest	2,011 73
Repairs, ordinary	9,131 71
Clothing for patients	656 36
Printing, postage, etc	1,200 95
Grounds	1,257 76
Engines and boilers	2,784 31
Overdraft 1920	21,489 65
Total	$176,462 49
Government grant for 1921	$40,514 50

WOMEN'S COLLEGE HOSPITAL, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	51
Number admitted	872
Births in Hospital	347
Total number under treatment	1,270
Discharged	1,193
Died	26
Under treatment, 30th September, 1921	51
	1,270

WOMEN COLLEGE HOSPITAL, TORONTO—*Continued.*

Sex.'s

Male	....
Female	1,270
	1,270

Revenue.

From the Province of Ontario	$3,973 71
From the City of Toronto	3,874 34
From the County of York	.....
From other municipalities of the Province	.....
From paying patients	37,209 23
From property belonging to the Hospital	.....
From subscriptions, bequests and donations from private individuals	587 20
From other sources not enumerated	2,947 79
Overdraft 1921	4,420 43
Total	$53,012 70

Expenditures.

Butchers' meat	$3,108 47
Butter and eggs	1,634 67
Flour, bread and meal	980 52
Milk	1,948 50
Tea and coffee	$240 22
Potatoes and other vegetables	1,253 47
Groceries and provisions not enumerated	2,018 43
Drugs and medicines	1,576 64
Medical and surgical appliances	3,423 00
Bedding, napery and general house furnishings	1,867 13
Brooms, brushes, mops, soap and cleaning appliances	395 41
Fuel	4,059 40
Electric light, gas, oil, candles	2,161 24
Water supply	204 65
Ice supply	440 65
Salaries and wages	16,103 00
Taxes and insurance	.....
Contingencies	956 79
Repairs, ordinary	1,714 25
Telephone	305 07
Printing, stationery, etc.	591 54
Surgical instruments	448 57
Laundry	3,310 88
Beer, wine and spirits	329 26
Clothing for patients	146 71
Coffins and funerals	248 46
Overdraft 1920	733 61
Total	$50,200 54
Government grant for 1921	$6,385 20

THE HOME FOR INCURABLE CHILDREN, TORONTO.

The following summaries show the operations of the Hospital during the official year;

Movements of Patients.

Number under treatment, 1st October, 1920	28
Admitted	12
Births in Hospital	.....
Total number under treatment	40
Discharged	10
Died	.....
Under treatment, 30th September, 1921	30
	40

Sex.

Male	16
Female	24
	40

Revenue.

From the Province of Ontario	$5,340 50
From the City of Toronto	1,357 30
From County of York	135 00
From patients for maintenance and treatment	1,579 40
Income from endowments, investments, etc	2,638 26
From subscriptions, donations and bequests from private individuals	14,167 00
From other sources	3,535 80
Total	$28,753 26

Expenditures.

Butchers' meat and fish	$875 53
Butter and eggs	731 87
Flour, bread and meal	392 15
Milk	911 44
Tea and coffee	94 51
Potatoes and other vegetables	243 83
Groceries and provisions not enumerated	809 55
Drugs and medicines Medical and surgical appliances	298 58
Beer, wine and spirits	.....
Bedding, napery andg eneral house furnishings Brooms, brushes, mops, soap and cleaning appliances	2,228 50
Fuel	1,173 19
Electric light, gas, oil and candles	144 66
Clothing for patients	272 68
Ice supply	.....
Salaries and wages	7,100 58
Contingencies	10,744 20
Repairs, ordinary	628 40
Stationery and printing	343 70
Taxes, insurance and interest	351 36
Water	97 14
Additions	3,507 34
Total	$30,949 21
Government grant for 1920	$5,356 00

GENERAL HOSPITAL, WALKERTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment 1st October, 1920	16
Number admitted	195
Number of births	18
	229
Discharged	211
Died	9
Under treatment, 30th September, 1921	9
	229

Sex.

Male	107
Female	122
	229

Revenue.

From the Province of Ontario	$828 76
From the Town of Walkerton	200 00
From the County of Bruce	2,500 00
From other municipalities of the Province	10 00
From endowments, investments, etc.	
From paying patients	9,160 13
From subscriptions, bequests and donations of private individuals	180 24
From other sources not enumerated	918 29
Overdraft 1921	844 81
Total	$14,642 23

Expenditures.

Butchers' meat	$476 62
Butter and eggs	601 15
Flour, bread and meal	391 03
Milk	409 86
Tea and coffee	96 30
Potatoes and other vegetables	332 67
Groceries and provisions not enumerated	928 89
Drugs and medicines	1,161 31
Medical and surgical appliances	
Beer, wine and spirits	
Bedding, napery and general house furnishings	484 62
Brooms, brushes, mops, soap and cleaning appliances	311 21
Fuel	2,197 00
Light: electric, gas, oil, and candles, power	977 51
Water supply / Ice supply	166 75
Salaries and wages	4,747 75
Insurance	20 37
Contingencies	378 75
Repairs, ordinary	2,758 11
Printing, postage, etc.	143 60
Clothing	
Total	$16,583 50

Government grant for 1921 $463 10

GENERAL HOSPITAL, WELLAND.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	27
Admitted	739
Number of births in Hospital	42
Total number under treatment	808
Discharged	750
Died	43
Under treatment, 30th September, 1921	15
	808

Sex.

Male	454
Female	354
	808

Revenue.

From the Province of Ontario	$1,633 60
From the Town of Welland	2,000 00
From the County of Welland	2,000 00
From other municipalities	
From paying patients	17,930 25
Subscriptions, donations, etc.	
Other sources	9,689 26
Total	$33,253 11

Expenditures

Butchers' meat	$1,705 48
Butter and eggs	1,272 05
Flour, bread and meal	667 06
Milk	1,325 65
Tea and coffee	
Potatoes and other vegetables	412 96
Groceries and provisions not enumerated	2,543 60
Drugs and medicines	776 99
Medical and surgical appliances and instruments	3,618 31

GENERAL HOSPITAL, WELLAND—*Continued.*

Beer, wine and spirits	$60 00
Bedding, house furnishings, etc.	551 96
Brooms, brushes, mops, soap and cleaning appliances	290 67
Fuel	2,848 44
Electric light, gas, oil, candles	499 94
Ice	
Salaries and wages	7,732 63
Contingencies	2,467 30
Repairs, ordinary	2,837 90
Water supply	
Printing, postage and stationery	275 88
Laundry	1,833 00
Taxes and insurance	545 79
Clothing for patients	
Ambulance expenses	2,342 46
Total	$35,008 07
Government grant for 1921	$2,392 60

HOTEL DIEU HOSPITAL, WINDSOR.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	78
Admitted	2,523
Births in Hospital	254
Total number under treatment	2,855
Discharged	2,650
Died	126
Under treatment, 30th September, 1921	79
	2,855

Sex.

Male	1,312
Female	1,543
	2,855

Revenue.

From the Province of Ontario	$1,861 24
From the Town of Windsor	1,412 50
From the County of Essex	1,382 75
From patients themselves for maintenance and treatment	47,075 28
Subscriptions, donations and bequests	5,716 72
From other sources not enumerated	15,154 81
Total	$72,603 30

Expenditures.

Butchers' meat	$73,46 30
Butter and eggs	2,339 62
Flour, bread and meal	2,600 45
Milk	3,903 40
Tea and coffee	557 77
Potatoes and other vegetables	2,096 40
Groceries and provisions not enumerated	8,557 26
Drugs and medicines	1,622 13
Medical and surgical appliances	2,625 05
Surgical instruments	235 26
Beer, wine and spirits	253 32
Bedding, napery and general house furnishings	1,357 22
Brooms, brushes, mops, soap and cleaning appliances	1,558 48
Fuel	8,336 98
Light: gas, oil and candles	3,656 83
Water supply	185 23
Hay and straw	191 45
Clothing for patients, including boots and shoes	5 00
Ice	1,229 49
Salaries and wages	18,860 88
Taxes and insurance	191 20
Contingencies	1,175 35
Repairs, ordinary	2,404 02
Printing, stationery, etc.	568 36
Total	$72,157 45
Government grant for 1921	$2,864 00

GENERAL HOSPITAL, WINGHAM.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	2
Admitted	203
Number of births in Hospital	15
Total number under treatment	220
Discharged	200
Died	12
Under treatment, 30th September, 1921	8
	220

GENERAL HOSPITAL, WINGHAM—*Continued.*

Sex.

Male	95
Female	125
	220

Revenue.

From the Province of Ontario	$90 27
From the Town of Wingham	300 00
From the County of Huron	1,000 00
From other municipalities	
From paying patients	8,163 13
Subscriptions, donations, etc.	202 51
Other sources	42
Total	$9,756 33

Expenditures.

Butchers' meat	$336 84
Butter and eggs	424 16
Flour, bread and meal	234 86
Milk	$198 32
Tea and coffee	134 94
Potatoes and other vegetables	136 55
Groceries and provisions not enumerated	447 79
Drugs and medicines	699 43
Medical and surgical appliances	
Bedding, napery and general house furnishings	436 01
Brooms, brushes, mops, soap and cleaning appliances	109 65
Fuel	1,344 91
Electric light, gas, oil, candles	188 41
Water supply / Ice	23 15
Salaries and wages	3,077 84
Contingencies	478 68
Repairs, ordinary	683 19
Taxes and insurance	69 77
Printing, stationery, etc.	104 14
Beer, wine and spirits	38 70
Total	$9,167 34
Government grant for 1921	$104 00

THE WOODSTOCK HOSPITAL.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients

Number under treatment, 1st October, 1920	28
Admitted	664
Births	84
Total number under treatment	776
Discharged	703
Died	42
Under treatment, 30th September, 1921	31
	776

Sex.

Male	326
Female	450
	776

Revenue.

From the Province of Ontario	$644 07
From the Town of Woodstock	2,322 07
From the County of Oxford	2,200 00
Income from endowments and investments	1,236 69
From paying patients themselves	28,490 75
Subscriptions, donations and bequests	130 00
Received from other sources	
Total	$35,023 58

Expenditures.

Butchers' meat	$3,393 89
Butter and eggs	2,531 83
Flour, bread and meal	759 05
Milk	1,296 16
Tea and coffee	337 55
Potatoes and other vegetables	173 48
Groceries and other provisions not enumerated	3,420 12
Drugs and medicines	
Medical and surgical appliances	2,734 00
Beer, wine and spirits	
Bedding, etc.	778 22
Brooms, brushes, mops, soap and cleaning appliances	829 62
Fuel	711 49
Electric light, gas, oil and candles	1,584 96
Ice	
Salaries and wages	8,691 50
Insurance and taxes	347 72
Contingencies	951 60
Repairs, ordinary	2,366 56
Printing, stationery, etc.	229 52
Water supply	86 73
Farm and grounds	420 10
Other expenses	3,078 80
Total	$34,722 90
Government grant for 1921	$1,767 30

BRANT SANATORIUM, BRANTFORD

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	25
Admitted	35
Total number under treatment	60
Discharged	21
Died	10
Under treatment, 30th September, 1921	29
	60

Sex.

Male	25
Female	35
	60

Revenue.

From the Province of Ontario	$6,579 00
From the City of Brantford	10,573 98
From the County of Brant	1,288 07
From other municipalities of the Province	945 00
From paying patients	2,633 50
Subscriptions, donations, etc.	
Bank overdraft 1921	1,526 25
Total	$23,545 80

Expenditures.

Butchers' meat and fish	$1,997 07
Butter and eggs	735 04
Flour, bread and meal	375 05
Milk	1,167 98
Tea and coffee	177 17
Potatoes and other vegetables	170 82
Groceries and provisions not enumerated	1,450 10
Drugs and medicines	239 66
Medical and surgical appliances	140 37
Surgical instruments	
Beer, wine and spirits	8 95
Bedding, napery and general furnishings	1,227 81
Brooms, brushes, mops, soap and cleaning appliances	338 69
Fuel	1,279 80
Electric light, gas, oil, candles	217 74
Water supply	26 20
Salaries and wages	7,568 37
Contingencies	1,127 16
Repairs, ordinary	871 90
Ice supply	54 00
Clothing for patients	
Printing, stationery, etc.	185 62
Taxes, insurance and interest	174 51
Overdraft 1920	3,593 58
Total	$23,127 56
Government aid for 1921	$6,956 25

NATIONAL SANATORIUM FOR CONSUMPTIVES, GRAVENHURST

(Muskoka Cottages)

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	74
Admitted	162
Total number under treatment	236
Discharged	165
Died	6
Under treatment, 30th September, 1921	65
	236

Sex.

Male	123
Female	113
	236

Revenue.

From the Dominion Government	$48,422 24
From paying patients themselves	64,354 63
From subscriptions, bequests and donations of private individuals	
From other sources	4,908 30
Total	$117,685 17

Expenditures.

Butchers' meat	$19,540 97
Butter and eggs	9,236 84
Flour, bread and meal	3,602 98
Milk	6,825 34
Tea and coffee	1,270 84
Potatoes and other vegetables	6,759 29
Groceries and provisions not enumerated	7,296 26

NATIONAL SANATORIUM FOR CONSUMPTIVES, GRAVENHURST—*Continued.*

Drugs and medicines	$3,471 09
Medical and surgical appliances	107 11
Bedding, napery and general house furnishings	9,143 13
Brooms, brushes, mops, soap and cleaning appliances and laundry	1,143 96
Fuel	12,767 83
Electric light, oil and candles	1,606 81
Maintenance of plant	
Telephone	422 93
Ice	194 30
Salaries and wages	30,825 01
Laundry	4,919 95
Advertising, printing, postage, etc.	1,523 96
Contingencies	2,380 11
Repairs, ordinary	$7,546 73
Insurance premiums	1,643 16
Bank interest and exchange	148 55
Travelling expenses	559 04
Improving grounds	
H.O. Expenses	1,747 18
X-Ray and medical staff supplies	
General expenses	
Hay and straw	
Depreciation	11,891 21
Total	146,574 58
Less maintenance costs of patients at annex	28,687 50
Total	$117,887 08

MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	237
Admitted	423
Total number under treatment	660
Discharged	419
Died	22
Under treatment, 30th September, 1921	219
	660

Sex.

Male	322
Female	338
	660

Revenue.

From the Province of Ontario	$53,679 00
From the City of Toronto, in payment of patients' maintenance	57,578 02
From other municipalities	3,312 20
From endowments, investments, etc.	13,839 31
From paying patients themselves	20,599 08
Subscriptions, donations, and bequests of private individuals	74,367 26
From all other sources not above enumerated	314 77
From Dominion Government	2,002 90
Total	$225,692 54

Expenditures.

Butchers' meat	$20,530 26
Butter and eggs	11,783 98
Flour, bread and meal	4,573 43
Milk	9,304 53
Tea and coffee	2,025 90
Potatoes and other vegetables	9,515 25
Groceries and provisions not enumerated	11,746 96
Drugs, medicines and X-Ray	5,860 20
Dentistry	1,134 12
Bedding, napery and general house furnishings	13,203 57
Brooms, brushes, mops, soap and cleaning appliances	2,425 21
Fuel	14,195 71
Travelling expenses	848 08
Electric light, gas, oil and candles	1,317 12
Ice supply	431 14
Salaries and wages	53,313 18
Insurance and taxes	1,734 19
Laundry	5,595 37
Contingencies	1,718 11
Repairs, ordinary	13,800 55
Interest and bank collection	1,699 07
Postage and advertising	4,453 38
Freight and livery	1,809 58
Surgical instruments	
X-Ray expenses	
Head office expenses	5,073 09
Medical staff supplies	163 26
Maintenance of transferred patients	28,687 50
Telephones	604 58
H. O. dispensary and auto	1,857 69
General expenses	2,889 36
Depreciation	10,066 02
Maintenance of patients of Toronto Hospital for Consumptives.	8,785 07
Total	$251,145 46
Government grant for 1921	$53,267 25

MOUNTAIN SANATORIUM, HAMILTON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	176
Admitted	189
Total number under treatment	365
Discharged	134
Died	41
Under treatment, 30th September 1921	190
	365

Sex.

Male	193
Female	172
	365

Revenue.

From the Province of Ontario	$47,301 00
From the City of Hamilton for patients' maintenance	49,835 02
From paying patients themselves	19,527 09
From endowments, investments, etc.	261 71
From other sources	
Total	$116,924 82

Expenditures.

Butchers' meat	$15,558 93
Butter and eggs	7,584 71
Flour, bread and meal	2,869 53
Milk	6,986 49
Potatoes and other vegetables and fruit	2,869 26
Groceries and provisions not enumerated	6,074 47
Drugs and medicines	3,836 93
Dispensary work	906 17
Brooms, brushes, mops, soap and cleaning appliances / Bedding, napery and general house furnishings	4,988 64
Fuel	7,626 62
Light: gas, oil and candles	1,461 36
Farm and stables expenses	3,500 36
Contingencies	
Salaries and wages	37,053 00
Taxes and insurance	559 58
Laundry	4,271 49
Advertising, stationery and postage, etc.	2,990 92
Repairs, ordinary	7,936 13
Ice	57 00
Interest	707 62
Water supply	879 52
Depreciation	7,770 00
Total	$127,488 73
Government grant for 1921	$47,301 00

FREEPORT SANATORIUM, KITCHENER

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	
Admitted	52
Total number under treatment	52
Discharged	21
Died	7
Under treatment, 30th September, 1921	24
	52

Sex.

Male	34
Female	18
	52

Revenue.

From the Government of Ontario for maintenance	$3,306 75
From the County of Waterloo	
From the City of Kitchener	1,064 75
From other municipalities	1,379 00
From paying patients	2,908 50
From subscriptions, bequests and donations from private individuals	8,962 20
From other sources not enumerated	4,274 73
Total	$21,895 93

Expenditures.

Butchers' meat and fish	$1,127 94
Butter and eggs	786 51
Flour, bread and meal	305 37
Milk	1,037 05
Tea and coffee	93 12
Potatoes and other vegetables	151 43
Groceries and provisions not enumerated	1,560 03
Drugs and medicines	464 46
Medical and surgical appliances	
Bedding, napery and general house furnishings	2,464 41
Brooms, brushes, mops, soap and cleaning appliances	321 45
Fuel	1,525 06
Electric light, gas, oil, candles	158 72
Water supply	
Ice supply	
Salaries and wages	7,250 17
Taxes, insurance and interest	80 00
Contingencies	410 90
Repairs, ordinary	1,065 51
Printing, stationery, etc.	369 00
Hay and straw	250 40
Farm and grounds	806 20
Total	$20,227 73
Government grant for 1921	$3,312 00

QUEEN ALEXANDRA SANATORIUM, LONDON.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	280
Admitted	349
Total number under treatment	629
Discharged	362
Died	29
Under treatment, 30th September, 1921	238
	629

Sex

Male	537
Female	92
	629

Revenue.

From the Province of Ontario	$19,176 75
From the City of London	16,219 79
From the County of Middlesex	1,887 00
From other municipalities	9,228 81
From patients themselves for maintenance and treatment	16,311 57
From subscriptions, donations and bequests from private individuals	8,751 17
From other sources	2,668 02
From Dominion Government	173,962 71
Total	$248,205 82

Expenditures.

Butchers' meat	$27,452 01
Butter and eggs	15,658 80
Flour, bread and meal	4,744 71
Milk	13,042 86
Tea and coffee	1,885 67
Potatoes and other vegetables	12,412 65
Groceries and provisions not enumerated	8,210 45
Drugs and medicines	2,375 19
Medical and surgical appliances	3,783 50
Surgical instruments	
Beer, wine and spirits	220 85
Bedding, napery and general house furnishings	4,428 11
Brooms, brushes, mops, soap and cleaning appliances	18,648 59
Fuel	14,873 00
Electric light, gas, oil, candles	3,666 25
Salaries and wages	82,163 19
Taxes and insurance	786 82
Contingencies	1,708 41
Ice supply	3 90
Printing, stationery, postage, etc.	2,197 57
Repairs, ordinary	9,388 88
Clothing for patients	
Depreciation	22,931 26
Total	$250,581 87
Government grant for 1921	$19,140 75

ROYAL SANATORIUM, OTTAWA.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	55
Admitted	104
Total number under treatment	159
Discharged	69
Died	37
Under treatment, 30th September, 1921	53
	159

Sex.

Male	65
Female	94
	159

Revenue.

From the Province of Ontario	$15,641 25
From the City of Ottawa	37,457 40
From paying patients	2,793 05
From all other sources	58 78
Total	$55,950 48

Expenditures.

Butchers' meat, poultry and fish	$4,506 44
Butter and eggs	1,293 97
Flour, bread and meal	918 98
Milk	2,491 73
Tea and coffee	403 08
Potatoes and other vegetables	1,302 93
Groceries and provisions not enumerated	711 66

ROYAL SANATORIUM, OTTAWA—*Continued.*

Brooms, brushes, soap and cleaning appliances	$340,99
Drugs, medicines and appliances	1,429 25
Beer, wine and spirits	
Surgical instruments	382 64
Bedding, napery and general house furnishings	2,621 44
Fuel	10,204 75
Electric light, gas, oil and candles	630 10
Water supply	
Ice supply	367 60

Salaries and wages	$23,707 23
Contingencies	1,318 85
Repairs, ordinary	1,610 12
Taxes and insurance	
Stationery, postage, etc.	405 38
Other expenditures not enumerated	
Poultry feed, hay and straw	1,303 34
Total	$55 950 48
Government grant for 1921	$15,495 75

CONSUMPTIVE SANATORIUM, ST. CATHARINES

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	4
Admitted	44
Total number under treatment	48
Discharged	29
Died	7
Under treatment, 30th September, 1921	12
	48

Sex

Male	28
Female	20
	48

Revenue.

From the Province of Ontario	$2,487 75
From the City of St. Catharines	819 00
From County of Lincoln	449 00
From patients themselves	1,211 50
From endowments, investments, etc.	62 80
From subscriptions, bequests and donations of private individuals	323 00
From other sources	940 84
From other municipalities	3,010 50
Total	$9,304 39

Expenditures.

Butchers' meat	$929 00
Butter and eggs	260 38
Flour, bread and meal	256 05
Milk	189 17
Tea and coffee	116 65
Potatoes and other vegetables	235 94
Groceries and provisions not enumerated	751 62
Drugs and medicines	228 95
Bedding, napery and general house furnishings	316 45
Brooms, brushes, mops, soap and cleaning appliances	110 38
Fuel	552 54
Electric light, oil, candles	49 88
Ice	140 52
Salaries and wages	2,426 31
Taxes and insurance	
Contingencies	324 36
Repairs, ordinary	220 81
Water supply	11 40
Hay and straw	150 58
Beer, wine and spirits	
Printing and postage	46 00
Total	$7,316 99
Government grant for 1921	$3,135 00

THE PREVENTORIUM, TORONTO.

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	28
Admitted	153
Total number under treatment	181
Discharged	106
Died	
Under treatment, 30th September, 1921	75
	181

Sex

Male	96
Female	85
	181

Revenue.

From the Province of Ontario	$14,207 25
From City of Toronto	16,390 60
From patients themselves for maintenance and treatment	
From property belonging to hospitals, endowments, etc.	
From subscriptions, donations and bequests from private individuals	920 91
From all other sources not above enumerated	2,355 64
Total	$33,874 40

Expenditures.

Butchers' meat	$1,025 97
Butter and eggs	1,295 03
Flour, bread and meal	825 00
Milk	3,336 31
Tea and coffee	91 50
Potatoes and other vegetables	483 13
Groceries and provisions not enumerated	1,726 12
Drugs and medicines	188 33
Surgical instruments and appliances	
Beer, wine and spirits	
Bedding, napery and general house furnishings	2,669 44
Brooms, brushes, mops, soap and cleaning appliances	347 33
Fuel	2,805 35
Electric light, gas, oil, candles	1,739 83
Water supply	278 92
Clothing for patients	622 11
Ice	260 70
Salaries and wages	13,417 33
Taxes and insurance	1,096 83
Contingencies	360 34
Printing, stationery, etc.	235 38
Repairs, ordinary	462 74
Total	$33,267 69
Government grant for 1921	$17,288 25

TORONTO FREE HOSPITAL FOR CONSUMPTIVES, WESTON.

(Including Queen Mary Hospital for Consumptive Children, and King Edward Annex.)

The following summaries show the operations of the Hospital during the official year:

Movements of Patients.

Number under treatment, 1st October, 1920	260
Admitted	483
Total number under treatment	743
Discharged	259
Died	133
Under treatment, 30th September, 1921	351
	743

Sex.

Male	365
Female	388
	743

Revenue.

From the Province of Ontario	$78,963 00
From the City of Toronto	131,404 57
From other municipalities	13,182 75
From patients themselves for maintenance and treatment	11,736 43
From endowments, investments, etc.	5,771 97
From subscriptions, donations and bequests from private individuals	35,959 11
From other sources	3,213 25
From Dominion Government	4,507 09
Received Muskoka Hospital for patients transferred	8,785 07
Total	$293,523 24

TORONTO FREE HOSPITAL FOR CONSUMPTIVES, WESTON—*Continued.*

Expenditures.

Butchers' meat	$24,236 23
Butter and eggs	14,213 00
Flour, bread and meal	7,780 38
Milk	17,246 21
Tea and coffee	2,260 94
Potatoes and other vegetables	11,110 38
Groceries and provisions not enumerated	11,617 32
Drugs and medicines	7,626 48
Laboratory expenses and medical appliances	
Bank interest and exchange	2,044 95
Bedding, napery and general house furnishings	17,332 26
Brooms, brushes, mops, soap and cleaning appliances	3,054 99
Fuel	40,982 90
Electric light, gas, oil and candles	1,862 97
Laundry	7,529 96
Maintenance of plant	
Improving grounds	
Advertising, stationery and postage	2,213 95
Ice	275 70
Salaries and wages	78,522 91
Taxes and insurance	1,485 61
Freight and livery	
Contingencies	317 95
Outside furnishings	
Travelling expenses	710 88
Repairs, ordinary	13,490 98
Head office expenses	7,718 65
Medical staff supplies	224 20
Horse expenses	
Telephones	1,023 40
Dispensary and X-ray	4,274 30
Water supply	3,366 34
Livery and trucking	1,862 82
Depreciation	38,704 38
Total	$323,091 04

Government grant for 1921 ..... $83,007 00

CITY HOUSES OF REFUGE

The usual information obtained from each Refuge, in respect of sex, and previous residence of the inmates, has been summarized as under:

Sex.

Male	1,813
Female	3,819
	5,632

Former Residence.

Received from cities and towns in which the Refuges are located	4,243
Received from counties in which the Refuges are located	437
Received from other counties in the Province	739
Immigrants and foreigners	213
	5,632

TABLE I.

City Refuges. Summary of the operations of each Refuge during the year:

Name of Refuge	Location.	Number of persons in the Refuges on the 1st of October, 1920	Number admitted during the year.	Total number under lodgment during the year ending 30th September, 1921.	Total number discharged during the year.	Number of deaths during the year.	Number of persons remaining in the Refuges on the 30th. Sept., 1921.
Home for the Friendless	Belleville	6	6	12	1	2	9
The Widows' Home	Brantford	16	2	18	2	2	14
Home for the Friendless	Chatham	19	25	44	14	.....	30
St. Paul's Home for the Aged	Cornwall	58	55	113	38	18	57
House of Providence	Dundas	141	78	219	48	12	159
Elliott Home	Guelph	22	6	28	3	.....	25
House of Providence	"	38	13	51	7	4	40
Aged Women's Home	Hamilton	50	8	58	.....	7	51
Hamilton House of Refuge	"	118	50	168	25	25	118
St. Peter's Infirmary	"	8	10	18	6	1	11
Home for Friendless Women and Infants	Kingston	20	27	47	20	7	20
House of Providence	"	151	88	239	42	42	155
House of Refuge	"	43	29	72	22	9	41
House of Providence	London	159	111	270	64	26	180
London Convalescent Home	"	1	5	6	3	.....	3
McCormick Home for Aged People	"	82	12	94	7	13	74
Elizabeth Residence for Elderly Ladies	Ottawa	10	10	20	4	.....	16
Monastery of Our Lady of Charity Refuge	"	171	91	262	67	77	188
Ottawa Home for Friendless Women	"	45	126	171	121	2	48
Protestant Home for the Aged	"	24	15	39	9	3	27
Protestant Orphan's Home Refuge Branch	"	19	8	27	7	3	17
St. Charles Hospice	"	219	76	295	56	26	213
St. Patrick's Asylum Refuge Branch	"	111	43	154	33	15	106
Women's Convalescent Home	"	5	36	41	38	.....	3
Parry Sound District House of Refuge	Powasson	15	18	33	8	2	23
Peterborough Protestant Home	Peterborough	35	4	39	8	3	28
St. Joseph's House of Providence	"	67	39	106	18	13	75
Thomas Williams Home	St. Thomas	13	7	20	2	2	16
District of Algoma House of Refuge	Sault Ste. Marie	38	32	70	13	13	44
Aged Men's Home	Toronto	47	16	63	4	9	50
Aged Women's Home	"	104	33	137	14	16	107
Church Home for the Aged	"	39	8	47	6	3	38
Good Shepherd Female Refuge	"	141	99	240	87	1	152
Haven and Prison Gate Mission	"	111	150	261	150	4	107
Hillcrest Convalescent Home	"	24	185	209	185	.....	24
Toronto House of Industry	"	98	147	245	94	24	127
House of Providence	"	340	396	736	297	48	391
Humewood House Association	"	21	45	66	46	1	19
Jewish Old Folks Home	"	34	7	41	.....	10	31
Julia Greenshields Home	"	31	3	34	1	2	31
Salvation Army Rescue Home	"	56	502	558	467	13	78
Toronto Industrial Refuge	"	58	10	68	14	.....	54
Victor Home for Young Women	"	26	116	142	113	.....	29
Home for the Friendless	Windsor	29	22	51	16	2	33
Totals for 1921		2,863	2,769	5,632	2,180	390	3,062
Totals for 1920		2,742	2,254	4,996	1,831	372	2,793

TABLE II.

City Refuges. Shows the aggregate stay of inmates upon which the amount of aid to be granted by the Government to each Refuge is based. The average stay per inmate is also given.

Name of Refuge	Location	Number of Inmates during the year.	Total days stay during the year.	Average stay per inmate in days.
Home for the Friendless	Belleville	12	2,808	234
The Widows' Home	Brantford	18	5,753	320
Home for the Friendless	Chatham	44	9,237	210
St. Pauls' Home for the Aged	Cornwall	113	21,378	189
House of Providence	Dundas	219	54,258	252
Elliott Home	Guelph	28	8,268	295
House of Providence	"	51	14,971	294
Aged Women's Home	Hamilton	58	18,369	317
Hamilton House of Refuge	"	168	44,601	265
St. Peter's Infirmary	"	18	2,996	166
Home for Friendless Women and Infants	Kingston	47	8,086	172
House of Providence	"	239	55,525	232
House of Refuge	"	72	16,149	224
House of Providence	London	270	65,653	243
London Convalescent Home	"	6	1,143	190
McCormick Home for Aged People	"	94	28,789	306
Elizabeth Residence for Elderly Ladies	Ottawa	20	56,59	283
Monastery of Our Lady of Charity Refuge	"	262	63,076	241
Ottawa Home for Friendless Women	"	171	18,511	108
Protestant Home for the Aged	"	39	10,405	267
Protestant Orphans' Home Refuge Branch	"	27	6,895	255
St. Charles' Hospice	"	295	79,383	269
St. Patrick's Asylum Refuge Branch	"	154	41,805	274
Women's Convalescent Home	"	41	1,117	27
Parry Sound District House of Refuge	Powasson	33	7,176	214
Peterborough Protestant Home	Peterborough	39	12,000	308
St. Joseph's House of Providence	"	106	25,136	237
Thomas Williams Home	St. Thomas	20	5,452	272
District of Algoma House of Refuge	Sault Ste. Marie	70	14,475	207
Aged Men's Home	Toronto	63	17,862	283
Aged Women's Home	"	137	37,463	273
Church Home for the Aged	"	47	14,059	299
Good Shepherd Female Refuge	"	240	53,154	221
Haven and Prison Gate Mission	"	261	41,326	158
Hillcrest Convalescent Home	"	209	9,104	44
Toronto House of Industry	"	245	41,204	168
House of Providence	"	736	141,485	192
Humewood House Association	"	66	6,110	94
Jewish Old Folks Home	"	41	10,564	258
Julia Greenshields Home	"	34	10,870	320
Salvation Army Rescue Home	"	558	31,361	56
Toronto Industrial Refuge	"	68	20,440	300
Victor Home for Young Women	"	142	11,148	79
Home for the Friendless	Windsor	51	11,116	218
Totals for 1921		5,632	1,116,340	198
Totals for 1920		4,996	1,039,450	208

TABLE III.

Showing the cost of maintaining the Refuges.

Name of Refuge.	Location.	Aggregate stay of inmates.	Cost of dietaries	Expenditure for fuel, salaries and wages, and all general expenses.	Total expenditure exclusive of extraordinary expenses.	Average cost per inmate per day.
			$ c.	$ c.	$ c.	$ c.
Home for the Friendless	Belleville	2,808	520 45	1,146 78	1,167 23	0 59
The Widows' Home	Brantford	5,753	1,279 72	2,499 14	3,778 86	0 66
Home for the Friendless	Chatham	9,237	2,393 26	3,056 35	5,449 61	0 59
St. Paul's Home for the Aged	Cornwall	21,378	6,215 58	4,447 77	10,663 35	0 50
House of Providence	Dundas	54,258	19,512 29	17,175 52	36 687 81	0 68
Elliott Home	Guelph	8,268	3,259 22	7,244 43	10,503 65	1 27
House of Providence	"	14,971	4,580 62	4,349 45	8,930 07	0 60
Aged Womens' Home	Hamilton	18,369	5,047 80	11,877 13	16,924 93	0 92
Hamilton House of Refuge	"	44,601	11,436 82	23,140 45	34,577 27	0 78
St. Peter's Infirmary	"	2,996	847 39	3,097 98	3,945 37	1 32
Home for Friendless Women and Inf	"	8,086	1,440 36	1,942 96	3,383 32	0 42
House of Providence	"	55,525	26,041 07	28,107 64	54,148 71	0 97
House of Refuge	"	16,149	5,076 93	7,058 13	12,135 06	0 75
House of Providence	London	65,653	15,309 32	14,545 83	29,855 15	0 45
London Convalescent Home	"	1,143	486 89	459 01	945 90	0 83
McCormick Home for Aged People	"	28,789	11,840 60	13,728 05	25,568 65	0 89
Elizabeth Residence for Elderly Ladies	Ottawa	5,659	1,933 12	4,647 45	6,580 57	1 16
Monas. of Our Lady of Charity Refuge	"	63,076	16,947 55	27,927 32	44,874 87	0 71
Ottawa Home for Friendless Women	"	18,511	3,917 24	25,173 39	29,090 63	1 57
Protestant Home for the Aged	"	10,405	1,890 75	5,563 85	7,454 60	0 71
Protestant Orphans' Home, Refuge Br	"	6,895	*			
St. Charles' Hospice	"	79,383	16,211 55	12,843 78	29,055 33	0 37
St. Patrick's Asylum Refuge Branch	"	41,805	9,381 33	40,410 52	49,791 85	1 19
Women's Convalescent Home	"	1,117	717 54	2,782 38	3,499 92	3 13
Parry Sound District House of Refuge	Powassan	7,176	1,575 12	8,082 54	9,657 66	1 35
Peterborough Protestant Home	Peterborough	12,000	2,709 41	6,120 00	8,829 41	0 74
St. Joseph's House of Providence	"	25,136	5,474 53	4,428 81	9,903 34	0 39
Thomas William's Home	St. Thomas	5,452	1,642 22	4,933 22	6,575 44	1 21
District of Algoma House of Refuge	Sault Ste. Marie	14,475	3,957 81	14,612 81	18,570 62	1 28
Aged Men's Home	Toronto	17,862	5,900 74	13,487 22	19,387 96	1 09
Aged Women's Home	"	37,463	11,927 20	22,974 08	34,901 28	0 93
Church Home for the Aged	"	14,059	5,976 61	12,676 95	18,653 56	1 33
Good Shepherd Female Refuge	"	53,154	17,692 87	14,213 62	31,906 49	0 60
Haven and Prison Gate Mission	"	41,326	9,599 58	22,645 14	32,244 72	0 78
Hillcrest Convalescent Home	"	9,104	6,783 90	8,286 21	15,070 11	1 65
Toronto House of Industry	"	41,204	9,085 46	37,056 79	46,142 25	1 12
House of Providence	"	141,485	46,422 31	51,137 33	97,559 64	0 69
Humewood House Association	"	6,110	1,559 35	6,650 58	8,209 93	1 34
Jewish Old Folks Home	"	10,564	4,122 50	10,005 25	14,127 75	1 34
Julia Greenshields Home	"	10,870	4,762 53	9,325 30	13,997 83	1 29
Salvation Army Rescue Home	"	31,361	3,784 49	11,945 72	15,730 21	0 50
Toronto Industrial Refuge	"	20,440	5,627 64	23,464 44	29,092 08	1 42
Victor Home for Young Women	"	11,148	2,001 32	4,944 38	6,945 70	0 62
Home for the Friendless	Windsor	11,116	3,111 84	2,201 77	5,313 61	0 48
Totals for 1921		1,116,340	319,914 83	552,417 47	872,332 30	1 28
Totals for 1920		1,039,450	346,445 03	461,678 78	808,123 81	0 78

*Receipts and expenditures shown in Orphange Branch.

TABLE IV.

City Refuges. Shows the basis upon which statutory aid is granted

Name of Refuge.	Location	Collective days' stay upon which computation of Refuge rate is based exclusive of infants under one year old.	Collective days stay upon which computation of Orphanage rate is based exclusive of infants under one year old.	Amount received from all sources other than Government.	Computation of Refuge rate of ten (10) cents per day.	Computation of Orphange rate of five (5) cents per day.	Total Government allowance to each House of Refuge for the year 1921.
Home for the Friendless	Belleville	2,808		1,450 16	280 80		280 80
The Widows' Home	Brantford	5,753		3,382 05	575 30		575 30
Home for the Friendless	Chatham	9,237		5,260 21	923 70		923 70
St. Paul's Home for the Aged	Cornwall	21,378		9,234 87	21 37 80		2,137 80
House of Providence	Dundas	54,258		30,809 61	5,425 80		5,425 80
Elliott Home	Guelph	8,268		10,124 12	826 80		826 80
House of Providence	"	14,971		7,928 31	1,497 10		1,497 10
Aged Women's Home	Hamilton	18,369		15,520 22	1,836 90		1,836 90
Hamilton House of Refuge	"	44,601		31,306 12	44,60 10		4,460 10
St. Peter's Infirmary	"	2,996		5,073 20	299 60		299 60
Home for Friendless Women and Infants	Kingston	1,573	3,934	3,311 95	157 30	196 70	354 00
House of Providence	"	55,525		49,578 61	5,552 50		5,552 50
House of Refuge	"	16,149		10,045 09	1,614 90		1,614 90
House of Providence	London	65,653		25,383 30	6,565 30		6,565 30
London Convalescent Home	"	1,143		889 29	114 30		114 30
McCormick Home for Aged People	"	28,789		19,253 27	2,878 90		2,878 90
Elizabeth Residence for Elderly Ladies	Ottawa	5,659		6,393 40	565 90		565 90
Monastery of Our Lady of Charity Refuge	"	51,482	11,594	27,450 34	5,148 20	579 70	5,727 90
Ottawa Home for Friendless Women	"	13,572	3,616	27,941 04	1,357 20	180 80	1,538 00
Protestant Home for the Aged	"	10,405		7,766 26	1,040 50		1,040 50
Protestant Orphans' Home Refuge Branch	"	6,895			689 50		689 50
St. Charles' Hospice	"	79,383		22,827 95	79,38 30		7,938 30
St. Patrick's Asylum Refuge Branch	"	41,805		35,696 19	4,180 50		4180 50
Women's Convalescent Home	"	1,117		687 50	111 70		111 70
Parry Sound District House of Refuge	Powasson	7,176		7,354 86	717 60		717 60
Peterborough Protestant Home	Peterborough	12,000		8,110 70	1,200 00		1,200 00
St. Joseph's House of Providence	"	25,136		7,729 21	2,513 60		2,513 60
Thomas Williams' Home	St. Thomas	5,452		5,863 36	545 20		545 20
District of Algoma House of Refuge	Sault Ste. Marie	14,475		17,126 36	1,447 50		1,447 50
Aged Men's Home	Toronto	17,862		18,032 47	1,786 20		1,786 20
Aged Women's Home	"	37,463		32,273 19	3,746 30		3,746 30
Church Home for the Aged	"	14,059		17,569 00	1,405 90		1,405 90

TABLE IV.—Continued.

City Refuges. Shows the basis upon which statutory aid is granted.

Name of Refuge.	Location.	Collective days' stay upon which computation of Refuge rate is based exclusive of infants under one year old.	Collective days' stay upon which computation of Orphanage rate is based exclusive of infants under one year old.	Amount received from all sources other than Government.	Computation of Refuge rate of ten (10) cents per day.	Computation of Orphanage rate of (5) cents per day.	Total Government allowance to each House of Refuge for the year 1921.
Good Shepherd Female Refuge	"	53,154	.....	26,780 85	5,315 40	.....	5,315 40
Haven and Prison Gate Mission	"	31,549	3,915	29,419 61	3,154 90	195 75	3,350 65
Hillcrest Convalescent Home	"	1,780	.....	14,906 11	178 00	.....	178 00
Toronto House of Industry	"	41,204	.....	215,282 08	4,120 40	.....	4,120 40
House of Providence	"	141,485	.....	83,687 94	14,148 50	.....	14,148 50
Humewood House Association	"	3,204	642	7,725 00	320 40	32 10	352 50
Jewish Old Folks' Home	"	10,564	.....	13,000 00	1,056 40	.....	1,056 40
Julia Greenshields' Home	"	10,870	.....	13,495 17	1,087 00	.....	1,087 00
Salvation Army Rescue Home	"	18,589	1,453	8,803 58	1,858 90	72 65	1,931 55
Toronto Industrial Refuge	"	20,440	.....	28,086 66	2,044 00	.....	2,044 00
Victor Home for Young Women	"	7,666	.....	6,166 15	766 60	.....	766 60
Home for the Friendless	Windsor	11,116	.....	4,604 81	1,111 60	.....	1,111 60
Totals for 1921		1,047,033	25,154	923,330 17	104,703 30	1,257 70	105,961 00
Totals for 1920		986,244	36,106	764,190 45	76,366 53	1,038 38	77,404 91

SEPARATE REPORTS

THE HOME FOR THE FRIENDLESS, BELLEVILLE.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	6
Admitted ..	6
Total number of inmates ..	12
Discharged	1
Died	2
In residence, 30th September, 1921	9
	12

Places admitted From.

City of Belleville	12
	12

Sex.

Male	6
Female	6
	12

Receipts.

From the Province of Ontario ..	$217 04
From the City of Belleville	300 00
From inmates	
Subscriptions and donations	
From other sources	1,150 16
Total	$1,667 20

Expenditures.

Food of all kinds	520 45
Clothing and furnishings	120 06
Fuel, light and cleaning	176 02
Salaries and wages	654 90
Repairs, ordinary	12 16
Other expenses	183 02
Total	$1,667 23
Government aid for 1921	280 80

THE WIDOWS' HOME, BRANTFORD.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	16
Admitted	2
Total number of inmates ..	18
Discharged	2
Died	2
In residence, 30th September, 1921	14
	18

Places admitted From.

City of Brantford	17
County of Brant	1
Other counties in Ontario	....
	18

Sex.

Female	18
	18

Receipts.

From the Province of Ontario ..	$449 60
From inmates	611 36
Subscriptions and donations	1,293 29
From other sources	1,477 40
Total	$3,831 65

Expenditures.

Food of all kinds	$1,279 72
Clothing and furnishings	60 60
Fuel, light, cleaning, etc.	442 27
Salaries and wages	798 53
Repairs, ordinary, etc.	850 94
Other expenses	346 80
Total	$3,778 86
Government aid for 1921	$575 30

THE HOME FOR THE FRIENDLESS, CHATHAM.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	19
Admitted	25
Total number of inmates ..	44
Discharged	14
Died	....
In residence, 30th September, 1921	30
	44

Places Admitted From.

City of Chatham	39
County of Kent	....
Other counties in Ontario	5
Immigrants, foreigners, etc.	....
	44

Sex.

Male	31
Female	13
	44

Receipts.

From the Province of Ontario ..	$681 15
From the City of Chatham	3,600 00
From inmates themselves	1,462 45
Subscriptions and donations of private individuals	55 45
Other sources	142 31
Total	$5,941 36

Expenditures.

Food of all kinds	$2,393 26
Clothing and furnishings	113 46
Fuel, light, cleaning, etc.	540 70
Salaries and wages	1,650 00
Repairs	104 89
Other expenses	647 30
Total	$5,449 61
Government aid for 1921	$923 70

ST. PAUL'S HOME FOR THE AGED, CORNWALL.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ...	58
Admitted	55
Total number of inmates ..	113
Discharged	38
Died	18
In residence, 30th September, 1921	57
	113

Places Admitted From.

Town of Cornwall	30
County of Stormont	80
Other counties	3
Immigrants	....
	113

Sex.

Male	50
Female	63
	113

Receipts.

From the Province of Ontario ..	$1,519 28
From the Town of Cornwall	.....
From other municipalities	300 00
From inmates themselves	912 00
Subscriptions, donations and bequests of private individuals	3,265 73
From other sources	4,757 14
Total	$10,754 15

Expenditures.

Food of all kinds	$6,215 58
Clothing and furnishings	554 58
Fuel, light, cleaning, etc.	2,368 68
Repairs	.....
Medicine and medical comforts	185 00
Other expenses	379 51
Salaries and wages	960 00
Total	$10,663 35
Government aid for 1921	$2,137 80

HOUSE OF PROVIDENCE, DUNDAS.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Patients.

In residence, 1st October, 1920 ..	141
Admitted	78
Total number of inmates. ..	219
Discharged	48
Died	12
In residence, 30th September, 1921	159
	219

Places Admitted From.

City of Hamilton	115
County of Wentworth	20
Other counties in Ontario	81
Immigrants, foreigners, etc.	3
	219

Sex.

Male	82
Female	137
	219

Receipts.

From the Province of Ontario ..	$4,111 13
From the Town of Dundas	2,184 80
From the County of Wentworth	
From other municipalities	
From inmates	13,840 85
Income from property	912 45
Subscriptions and donation. of private individuals	5,744 18
Other sources	7,127 33
Total	$34,920 74

Expenditures.

Food of all kinds	$19,512 29
Clothing, furniture and furnishings	2,797 75
Fuel, light and cleaning	5,513 30
Salaries	1,382 90
Repairs	1,424 27
Other expenditures	4,418 18
Medicine and medical comforts..	460 93
Taxes and insurance	1,178 19
Total	$36,687 81
Government aid for 1921	$5,425 80

THE ELLIOTT HOME, GUELPH.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	22
Admitted	6
Total number of inmates ..	28
Discharged	3
Died	....
In residence, 30th September, 1921	25
	28

Places Admitted From.

City of Guelph	16
County of Wellington	1
Other counties in Ontario	11
Immigrants, foreigners, etc.	....
	28

Sex.

Male	9
Female	19
	28

Revenue.

From the Province of Ontario ..	$583 05
From the City of Guelph	
From the County of Wellington	
Payments from inmates	7,803 46
Subscriptions and donations	800 00
From other sources	1,520 66
Income from property	
Total	$10,707 17

Expenditures.

Food of all kinds	$3,259 22
Clothing, furniture and furnishings	140 00
Fuel, gas, etc..	1 337 42
Salaries and wages	3,105 59
Repairs	
Other expenses	523 52
Medicine and medical comforts	
Repairs, additions	2,137 90
Total	$10,503 65
Government aid for 1921	$826 80

HOUSE OF PROVIDENCE, GUELPH.

Full particulars of the operations of this Institution will be found in the annexed summaries :

Movements of Inmates.

In residence, 1st October, 1920 ..	38
Admitted	13
Total number of inmates ..	51
Discharged	7
Died	4
In residence, 30th September, 1921	40
	51

Places Admitted From.

From the City of Guelph	30
From the County of Wellington.	13
Other counties in Ontario	5
Foreigners, etc.	3
	51

Sex.

Male	39
Female	12
	51

Receipts.

From the Province of Ontario ..	$1,120 59
From the City of Guelph	4,033 50
From inmates	1,281 73
From the County of Wellington	200 00
Subscriptions, donations and bequests	2,413 08
From other sources	
Total	$9,048 90

Expenditures.

Food of all kinds	$4,580 62
Clothing and furnishings	1,296 48
Fuel, light and cleaning	1,198 74
Salaries and wages	349 50
Ordinary repairs	429 21
Live stock and farm grounds	710 07
Other expenses	189 06
Medicine and medical comforts	176 39
Total	$8,930 07
Government aid for 1921	$1,497 10

HOME FOR AGED WOMEN, HAMILTON.

Full particulars of the operations of this Institution will be found in the annexed summaries :

Movements of Inmates.

In residence, 1st October, 1920 .	50
Admitted	8
Tota' number of inmates. ..	58
Number discharged	....
Number of deaths	7
In residence, 30th September, 1921	51
	58

Places Admitted From.

City of Hamilton	58
	58

Sex.

Female	58
	58

Receipts.

From the Government of Ontario	$1,416 67
From the City of Hamilton	3,642 80
Income from property	3,306 50
Subscriptions and donations of private individuals	4,413 14
From inmates	2,800 00
From all other sources	1,357 78
Total	$16,936 89

Expenditures.

Food of all kinds	$5,047 80
Clothing, furniture, etc..	688 52
Fuel, gas, cleaning, etc.	2,881 07
Salaries and wages	5,086 69
Ordinary repairs	1,423 33
Other expenses	1,707 67
Outdoor relief	
Medicine and medical comforts	89 85
Total	$16 924 93
Government aid for 1921	$1,836 90

HOUSE OF REFUGE, HAMILTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	118
Admitted	50
Total number of inmates	168
Discharged	25
Died	25
In residence, 30th September, 1921	118
	168

Places Admitted From.

City of Hamilton	168
County of Wentworth	....
	168

Sex.

Male	94
Female	74
	168

Receipts.

From the Government of Ontario	$3,271 15
From the City of Hamilton	29,649 59
From other municipalities	....
From inmates	1,384 50
Subscriptions, donations of private individuals	272 03
From all other sources	....
Total	$34,577 27

Expenditures.

Food of all kinds	$12,436 82
Clothing, furnishings, etc	834 77
Fuel, light, cleaning, etc	7,256 38
Salaries and wages	10,214 94
Repairs	2,817 11
Taxes and insurance	341 65
Other expenses	552 50
Medicine and medical comforts	123 10
Total	$34,577 27
Government aid for 1921	$4,460 01

ST. PETER'S HOME, HAMILTON.

Full particulars of the operation of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	8
Admitted	10
Total number of inmates	18
Discharged	6
Died	1
In residence, 30th September, 1921	11
	18

Places Admitted From.

City of Hamilton	18
County of Wentworth and other counties	....
Immigrants, foreigners, etc.	....
	18

Sex.

Male	18
Female	....
	18

Receipts.

From the Ontario Government	$226 69
From the City of Hamilton	170 28
From the County of Wentworth	....
From inmates	1,416 00
From subscriptions, donations, etc.	1,383 00
From other sources	2,050 87
Income from property belonging to Home	53 05
Total	$5,299 89

Expenditures.

Food of all kinds	$847 39
Clothing, furnishings, etc.	29 70
Fuel, light and cleaning	369 45
Salaries and wages	1,284 00
Repairs	1,118 67
Livestock and feed	25 57
Other expenses	241 54
Medicine and medical comforts	3 00
Farm and grounds	26 05
Total	$3,945 37
Government aid for 1921	$299 60

HOME FOR FRIENDLESS WOMEN AND INFANTS, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	20
Admitted	27
Total number of inmates	47
Discharged	20
Died	7
In residence, 30th September, 1921	20
	47

Places Admitted From.

City of Kingston	18
County of Frontenac	10
Other counties in Ontario	19
Immigrants, foreigners, etc.	.....
	47

Sex.

Male	23
Female	24
	47

Receipts.

From the Province of Ontario	$215 37
From the City of Kingston	500 00
From the County of Frontenac	300 00
From inmates	1,581 00
Subscriptions and donations	254 00
Other sources	676 95
Total	$3,527 32

Expenditures.

Food of all kinds	$1,440 36
Clothing and furnishings	130 70
Fuel, light and cleaning, etc.	568 00
Salaries and wages	790 00
Repairs	130 74
Additions	.....
Other expenses	323 52
Total	$3,383 32
Government aid for 1921	$354 00

HOUSE OF REFUGE, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	43
Admitted	29
	72
Discharged	22
Died	9
In residence, 30th September, 1921	41
	72

Places Admitted From.

City of Kingston	31
County of Frontenac	22
Other counties of Ontario	19
Immigrants, foreigners, etc	.....
	72

Sex.

Male	39
Female	33
	72

Receipts.

From the Province of Ontario	$1,173 37
From the City of Kingston	1,000 00
County of Frontenac	3,261 18
Lennox and Addington	2,543 06
Payments from inmates	948 46
Income from property	1,838 09
Subscriptions and donations	127 00
Other sources	327 30
Total	$11,218 46

Expenditures.

Food of all kinds	$5,076 93
Clothing, furniture and furnishings	1,698 49
Fuel, light and cleaning	2,030 60
Salaries and wages	1,792 10
Repairs, ordinary	516 33
Farming	393 07
Other expenses	515 35
Medicine and medical comforts	74 07
Repairs, additions	38 12
Printing and postage, etc.	.....
Total	$12,135 06
Government aid for 1921	1,614 90

HOUSE OF PROVIDENCE, KINGSTON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	151
Admitted	88
Total number of inmates ..	239
Discharged	42
Died	42
In residence, 30th September, 1921	155
	239

Places Admitted From.

City of Kingston	71
County of Frontenac	12
Other counties	144
Immigrants, foreigners, etc.	12
	239

Sex.

Male	103
Female	136
	239

Receipts.

From the Province of Ontario ..	$4,535 21
From the City of Kingston	100 00
From the County of Frontenac .	906 74
From other municipalities	2,410 11
Income from property	664 00
Payment from inmates	10,150 00
Subscriptions and donations	12,754 69
Other sources	22,593 07
Total	$54,113 82

Expenditures.

Food of all kinds	$26,041 07
Clothing, furnishings, etc	4,530 96
Salaries and wages	453 40
Fuel, light and cleaning	12,838 18
Repairs, ordinary and additions .	6,964 22
Taxes and insurance	842 01
Other expenses	1,256 74
Medicine and medical comforts	847 86
Printing and postage	374 27
Total	$54,148 71
Government aid for 1921	$5,552 50

HOME FOR AGED PEOPLE, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	82
Admitted	12
Total number of inmates ..	94
Discharged	7
Died	13
In residence, 30th September, 1921	74
	94

Places Admitted From.

City of London	42
Other counties of Ontario	26
County of Middlesex	16
Immigrants, foreigners, etc	10
	94

Sex.

Male	43
Female	51
	94

Receipts.

From the Province of Ontario ..	$2,235 59
From the City of London	9,717 20
From the County of Middlesex	
From other municipalities	
Payment from inmates	7,307 50
Subscriptions and donations	1,215 60
Other sources	1,012 97
Total	$21,488 86

Expenditures.

Food of all kinds	$11,840 60
Clothing, furniture and furnishings	995 63
Fuel, light and cleaning	2,914 85
Salaries and wages	6,999 27
Repairs, ordinary	792 59
Drugs and medicines	210 08
Other expenses	1,815 63
Total	$25,568 65
Government aid for 1921	$2,878 90

HOUSE OF PROVIDENCE, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920..	159
Admitted	111
Total number of inmates ..	270
Discharged	64
Died	26
In residence, 30th September, 1921	180
	270

Places Admitted From.

City of London	75
County of Middlesex	10
Other counties in Ontario	185
Immigrants, foreigners, etc.	....
	270

Sex.

Male	103
Female	167
	270

Receipts.

From the Province of Ontario ..	$4,681 23
From the City of London	
From other municipalities	
Payment from inmates	13,376 20
Subscriptions and donations	11,007 10
Other sources	1,000 00
Total	$30,064 53

Expenditures.

Food of all kinds	$15,309 32
Clothing, furniture and furnishings	2,034 21
Fuel, light and cleaning	5,861 17
Salaries and wages	1,330 00
Repairs, ordinary	3,162 11
Taxes, insurance, etc	1,098 02
Other expenses	778 48
Medicine and medical comforts .	281 84
Total	$29,855 15
Government aid for 1921	$6,565 30

CONVALESCENT HOME, LONDON.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	1
Admitted	5
Total number of inmates ..	6
Discharged	3
Died	....
In residence, 30th September, 1921	3
	6

Places Admitted From.

City of London	6
County of Middlesex and other counties	....
	6

Sex.

Male	3
Female	3
	6

Receipts.

From the Province of Ontario ..	$61 82
From the City of London	
Payment from inmates	415 42
Subscriptions and donations	432 50
Other sources	41 37
Total	$951 11

Expenditures.

Food of all kinds	$486 89
Clothing, furniture and furnishings	
Fuel, light, and cleaning	105 28
Salaries and wages	250 10
Repairs, ordinary	20 35
Other expenses	83 28
Total	$945 90
Government aid for 1921	$114 30

THE REFUGE OF OUR LADY OF CHARITY, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	171
Admitted	91
Total number of inmates ..	262
Discharged	67
Died	7
In residence, 30th September, 1921	188
	262

Places Admitted From.

City of Ottawa	199
County of Carleton	18
Other counties in Ontario	28
Immigrants, foreigners, etc.	17
	262

Sex.

Female	262
	262

Receipts.

From the Government of Ontario	$4,244 59
From the City of Ottawa	796 86
County of Carleton	50 00
From payments made by inmates	3,215 00
Subscriptions, donations, etc. ..	1,958 30
Other sources	21,430 18
Income from Home property	
Total	$31,694 93

Expenditures.

Food of all kinds	$16,947 55
Clothing and furnishings	5,736 79
Fuel, light, cleaning, etc.	9,791 01
Salaries and wages	2,179 45
Repairs	2,100 65
Live stock and farm grounds ...	3,369 10
Taxes and insurance	1,892 00
Medicine and medical comforts	819 48
Repairs, additions	950 00
Other expenses	1,088 84
Total	$44,874 87
Government aid for 1921	$5,727 90

THE HOME FOR FRIENDLESS WOMEN, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	45
Admitted	126
Total number of inmates ..	171
Discharged	121
Died	2
In residence, 30th September, 1921	48
	171

Places Admitted From.

City of Ottawa	104
County of Carleton	7
Other counties in Ontario	42
Immigrants, etc.	18
	171

Sex.

Male	26
Female	145
	171

Receipts.

From the Province of Ontario ..	$1,143 93
From the City of Ottawa	750 00
From the County of Carleton ..	50 00
Payment from inmates	
Subscriptions and donations	
From all other sources and laundry	81 00
	27,060 04
Total	$29,084 97

Expenditures.

Food of all kinds	$3,917 24
Clothing, furniture and furnishings	1,772 10
Fuel, light and cleaning	3,001 92
Salaries and wages	10,251 30
Repairs, ordinary	363 29
Taxes and insurance	467 78
Medicine and medical comforts..	883 52
Repairs, additions	318 61
Other expenses	8,114 87
Total	$29,090 63
Government aid for 1921	$1,538 00

HOME FOR THE AGED, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, October 1st, 1920..	24
Admitted	15
Total number of inmates. ..	39
Discharged	9
Died	3
In residence, 30th September, 1921	27
	39

Places Admitted From.

City of Ottawa	36
County of Carleton	2
Other counties	1
Immigrants, foreigners	....
	39

Sex.

Male	39
Female	....
	39

Receipts.

From the Government of Ontario	$697 44
From the City of Ottawa	1,500 00
From the County of Carelton ..	300 00
From other municipalities	
From payments made by inmates	2,175 86
Subscriptions, donations, etc. ..	2,496 00
Income from property	
Other sources	1,294 40
Total	$8,463 70

Expenditures.

Food of all kinds	$1,890 75
Clothing and furnishings.	
Fuel, light, cleaning, etc.	2,032 50
Salaries and wages, etc	2,160 00
Repairs.	186 01
Taxes and insurance	291 71
Other expenses	858 63
Medicine and medical comforts .	35 00
Total	$7,454 60
Government aid for 1921	$1,040 50

REFUGE BRANCH, ORPHANS' HOME, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	19
Admitted	8
Total number of inmates ..	27
Discharged	7
Died	3
In residence, 30th September, 1921	17
	27

Places Admitted From.

City of Ottawa	23
County of Carleton	....
Other counties in Ontario	4
Immigrants, etc.	....
	27

Sex.

Female	27
	27

Receipts.

From the Province of Ontario...	$1,046 92
From the City of Ottawa	2,250 00
From the County of Carleton ..	300 00
Payment from inmates	2,414 68
Income from property	1,420 30
Subscriptions and donations, etc	8,267 92
Total	$15,699 82

Expenditures.

Food of all kinds	$4,857 56
Clothing, furniture and furnishings	1,233 60
Fuel, light and cleaning	2,293 38
Salaries and wages	3,894 10
Taxes and insurance	328 58
Repairs, ordinary	359 36
Medicine, medical comforts	102 18
Repairs, additions	700 00
Other expenses	2,070 91
Total	$15,839 67
Government aid for 1921	$689 50

ST. CHARLES' HOSPICE, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	219
Admitted	76
Total number of inmates	295
Discharged	56
Died	26
In residence, 30th September, 1920	213
	295

Places Admitted From.

City of Ottawa	147
County of Carleton	30
Other counties	45
Immigrant, foreigners, etc	73
	295

Sex.

Male	113
Female	182
	295

Receipts.

From the Government of Ontario	$6,190 51
From the City of Ottawa	4,200 00
From the County of Carleton	50 00
From other municipalities	1,737 00
Income from property belonging to the House	575 35
From payments made by inmates	9,744 30
Subscriptions, donations, etc	6,165 41
Other sources	355 89
Total	$29,018 46

Expenditures.

Food of all kinds	$16,211 55
Clothing and furnishings	2,207 39
Fuel, light, cleaning, etc	6,804 81
Salaries and wages	1,625 00
Repairs	931 70
Taxes and insurance	400 00
Other expenses	649 55
Medicine and medical comforts	225 33
Total	$29,055 33
Government aid for 1921	$7,938 30

ST. PATRICK'S REFUGE, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	111
Admitted	43
Total number of inmates	154
Discharged	33
Died	15
In residence, 30th September, 1921	106
	154

Places Admitted From.

City of Ottawa	109
County of Carleton	22
Other counties in Ontario	21
Immigrants, etc	2
	154

Sex.

Male	65
Female	89
	154

Receipts.

From the Government of Ontario	$4,358 83
From the City of Ottawa	2,775 00
From the County of Carleton	50 00
From other municipalities	
From payments made by inmates	13,177 27
Subscriptions, donations, etc	15,002 86
Other sources	4,691 06
Total	$40,055 02

Expenditures.

Food of all kinds	$9,381 33
Clothing and furnishings	782 30
Fuel, light, cleaning, etc	6,637 19
Salaries and wages	3,272 85
Repairs, ordinary	1,650 54
Additions	2,579 77
Live stock and farm grounds	2,439 10
Taxes and insurance	920 65
Medicine and medical comforts	79 34
Other expenses	22,048 78
Total	$49,791 85
Government aid for 1921	$4,180 50

CONVALESCENT HOME FOR WOMEN, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Patients.

In residence, 1st October, 1920 ..	5
Admitted	36
Total number of inmates ..	41
Discharged	38
Died	....
In residence, 30th September, 1921	3
	41

Places Admitted From.

City of Ottawa	38
County of Carleton and other counties	3
Immigrants, foreigners.	....
	41

Sex.

Male	....
Female	41
	41

Receipts.

From the Province of Ontario ..	$122 37
From the City of Ottawa	600 00
From other municipalities	
Payments from inmates	87 50
Income from property belonging to the Home	
Subscriptions, donations, etc.	
Other sources	
Other receipts included in general fund of May Court Club	
Total	$809 87

Expenditures.

Food of all kinds	$717 54
Clothing and furnishings	100 12
Fuel, light and cleaning	616 99
Salaries and wages	1,728 55
Repairs, ordinary	45 57
Medicine and medical comforts .	73 55
Other expenses	217 60
Repairs and additions	
Total	$3,499 92
Government aid for 1921	$111 70

ELIZABETH RESIDENCE FOR ELDERLY LADIES, OTTAWA.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	10
Admitted	10
Total number of inmates ..	20
Discharged	4
Deaths	....
In residence, 30th September, 1921	16
	20

Places Admitted From.

City of Ottawa	20
Other cities and counties	....
Immigrants, foreigners, etc.	....
	20

Sex.

Female	20
	20

Receipts.

From the Province of Ontario ..	$176 74
From the City of Ottawa	
From inmates	6,239 20
Subscriptions and donations	
From other sources	154 20
Total	$6,570 14

Expenditures.

Food of all kinds	$1,933 12
Clothing, furnishings, etc	726 95
Fuel, light, cleaning, etc	886 40
Salaries and wages	1,428 51
Repairs	1,114 35
Other expenses	440 80
Medicine and medical comforts .	4 75
Taxes and insurance	45 69
Total	$6,580 57
Government aid for 1921	$565 90

THE PETERBOROUGH PROTESTANT HOME.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	35
Admitted	4
Total number of inmates	39
Discharged	8
Died	3
In residence, 30th September, 1921	28
	39

Places Admitted From.

City of Peterborough	39
County of Peterborough	....
	39

Sex.

Male	20
Female	19
	39

Receipts.

From the Province of Ontario	$878 42
From the City of Peterborough	3,590 50
From inmates themselves	2,410 74
Income from property belonging to the Home	
Subscriptions, donations from private individuals	586 55
From all sources not above mentioned	1,522 91
Total	$8,989 12

Expenditures.

Food of all kinds	$2,709 41
Clothing and furnishings	228 71
Fuel, light and cleaning	1,433 11
Repairs, ordinary	249 04
Salaries and wages	2,872 90
Other expenses	1,247 40
Medicine and medical comforts	88 84
Total	$8,829 41
Government grant for 1921	$1,200 00

THE PARRY SOUND DISTRICT HOUSE OF REFUGE, POWASSAN.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	15
Admitted	18
Total number of inmates	33
Discharged	8
Died	2
In residence, 30th September, 1921	23
	33

Places Admitted From.

District of Parry Sound	33
Other counties	....
Immigrants, etc.	....
	33

Sex.

Male	22
Female	11
	33

Receipts.

From the Government of Ontario	$316 47
From other municipalities	6,654 87
From payments made by inmates	314 50
Subscriptions, donations, etc.	35 00
Received from all other sources	350 49
Total	$7,671 33

Expenditures.

Food of all kinds	$1,575 12
Clothing and furnishings	720 95
Fuel, light, cleaning, etc.	1,883 06
Salaries and wages	2,547 29
Repairs	2,256 90
Other expenses	660 34
Medicine and medical comforts	14 00
Taxes and insurance	
Total	$9,657 66
Government aid for 1921	$717,60

THE HOUSE OF PROVIDENCE, PETERBOROUGH.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	67
Admitted	39
Total number of inmates	106
Discharged	18
Died	13
In residence, 30th September, 1921	75
	106

Places Admitted From.

City of Peterborough	51
County of Peterborough	20
From other counties	35
Immigrants, foreigners, etc	..
	106

Sex.

Male	37
Female	69
	106

Receipts.

From the Province of Ontario	$2,076 86
From the City and County of Peterborough	559 97
From municipalities for board of inmates	
From inmates	4,037 75
Subscriptions and donations	2,202 00
Other sources	929 49
Total	$9,806 07

Expenditures.

Food of all kinds	5,474 53
Clothing and furnishings	922 63
Fuel, light and cleaning	2,083 95
Repairs, ordinary	465 75
Other expenses	551 81
Medicine and medical comforts	235 37
Salaries and wages	169 30
Total	$9,903 34
Government aid for 1921	$2,513 60

THE THOMAS WILLIAMS HOME, ST. THOMAS.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	13
Admitted	7
Total number of inmates	20
Discharged	2
Died	2
In residence, 30th September, 1921	16
	20

Places Admitted From.

City of St. Thomas	20
	20

Sex.

Male	9
Female	11
	20

Receipts.

From the Province of Ontario	$363 23
From the City of St. Thomas	
From payments by inmates	429 05
Subscriptions, etc.	2,114 10
Income from property	3,310 26
From other sources	9 95
Total	$6,226 59

Expenditures.

Food of all kinds	$1,642 22
Clothing and furnishings	732 86
Fuel, light, cleaning, etc.	1,273 54
Salaries and wages	1,078 95
Repairs, ordinary	1,616 30
Other expenses	160 82
Medicine and medical comforts	70 75
Repairs, additions	
Total	$6,575 44
Government aid for 1921	$545 20

HOUSE OF REFUGE, DISTRICT OF ALGOMA, SAULT STE. MARIE.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	38
Admitted	32
Total number of inmates ..	70
Discharged	13
Died	13
In residence, 30th September, 1921	44
	70

Places Admitted From.

Town of Sault Ste. Marie	1
District of Algoma	30
Other counties	....
Immigrants	39
	70

Sex.

Male	55
Female	15
	70

Receipts.

From the Province of Ontario ..	$1,232 89
From City of Sault Ste. Marie .	12,533 03
From inmates themselves	1,309 00
Subscriptions, donations and bequests of private individuals	
From other sources	786 61
From other municipalities	2,497 72
Total	$18,359 25

Expenditures.

Food of all kinds	$3,957 81
Light, fuel, cleaning, etc	946 55
Repairs, ordinary	485 06
Medicine and medical comforts..	817 79
Salaries and wages	3,371 00
Clothing and furnishings	117 47
Farming	619 31
Repairs, additions	502 00
Other expenses	893 63
Bank overdraft.....	6,500 00
Total	$18,570 62
Government aid for 1921	$1,447 50

AGED MEN'S HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	47
Admitted	16
Total number of inmates ..	63
Discharged	4
Died	9
In residence, 30th September, 1921	50
	63

Places Admitted From.

City of Toronto	53
County of York and other counties	1
Immigrants, etc.	9
	63

Sex.

Male	63
	63

Receipts.

From the Government of Ontario	$1,312 64
From the City of Toronto	352 00
From payments made by inmates	10,746 00
Subscriptions, donations, etc. ..	311 44
Received from all other sources	6,627 03
Total	$19,349 11

Expenditures.

Food of all kinds	$5,900 74
Clothing and furnishings	650 62
Salaries and wages	5,255 80
Fuel, light, cleaning, etc.	2,771 47
Repairs	725 88
Other expenses.....	4,053 60
Medicine and medical comforts .	29 85
Taxes and insurance	
Total	$19,387 96
Government aid for 1921	$1,786 20

AGED WOMEN'S HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	104
Admitted	33
Total number of inmates ..	137
Discharged	14
Deaths	16
In residence, 30th September, 1921	107
	137

Places Admitted From.

City of Toronto	123
Other cities and counties.....	1
County of York	13
Immigrants, foreigners, etc.	....
	137

Sex.

Female	137
	137

Receipts.

From the Province of Ontario ..	$2,817 90
From the City of Toronto	528 00
From inmates	24,657 34
Subscriptions and donations	442 70
From other sources	6,645 15
Total	$35,091 09

Expenditures.

Food of all kinds	$11,927 20
Clothing, furnishings, etc.	592 43
Fuel, light, cleaning, etc.	6,098 82
Salaries and wages	9,951 90
Repairs	3,714 32
Other expenses	2,583 42
Medicine and medical comforts .	33 19
Taxes and insurance	.....
	$34,901 28
Government aid for 1921	$3,746 30

CHURCH HOME FOR THE AGED, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	39
Admitted	8
Total number of inmates ..	47
Discharged	6
Died	3
In residence, 30th September, 1921	38
	47

Places Admitted From.

City of Toronto	42
County of York	2
Other counties of Ontario	2
Immigrants, etc.	1
	47

Sex.

Male	1
Female	46
	47

Receipts.

From the Government of Ontario	$1,089 53
From the City of Toronto	352 00
From other municipalities	.....
From payments made by inmates	10,252 62
Income from property belonging to Home	.....
Subscriptions, donations, etc. ..	6,844 02
Other sources	120 36
Total	$18,658 53

Expenditures.

Food of all kinds	$5,976 61
Clothing and furnishings	930 32
Fuel, light and cleaning, etc. ..	1,907 76
Salaries and wages	5,130 91
Repairs	2,174 91
Other expenses	2,378 78
Medicine and medical comforts .	154 27
Total	$18,653 56
Government aid for 1921	$1,405 90

GOOD SHEPHERD FEMALE REFUGE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	141
Admitted	99
Total number of inmates ..	240
Discharged	87
Died	1
In residence, 30th September, 1921	152
	240

Places Admitted From.

City of Toronto	173
County of York and other counties	62
Immigrants and foreigners	5
	240

Sex.

Female	240
	240

Receipts.

From the Province of Ontario ..	$3,840 61
From the City of Toronto	343 00
From inmates	
Subscriptions and donations	
From other sources and laundry	16,171 46
Federations of Charities	10,266 39
Total	$30,621 46

Expenditures.

Food of all kinds	$17,692 87
Clothing, furniture and furnishings	4,211 14
Fuel, light and cleaning	4,277 97
Salaries and wages	540 00
Repairs	2,956 82
Drugs and medicines	1,404 90
Other expenditures	822 79
Total	$31,906 49
Government grant for 1921	$5,315 40

THE HAVEN, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	111
Admitted	150
Total number of inmates ..	261
Discharged	150
Deaths	4
In residence, 30th September, 1921	107
	261

Places Admitted From.

City of Toronto	231
County of York	....
Other counties	22
Immigrants, etc.	8
	261

Sex.

Male (infants)	38
Female	223
	261

Receipts.

From the Province of Ontario ..	$2,621 69
From the City of Toronto	1,999 92
From inmates	6,034 24
Income from laundry, etc.	15,346 81
Subscriptions and donations	5,690 13
From other sources	348 51
Total	$32,041 30

Expenditures.

Food of all kinds	$9,599 58
Clothing, furnishings, etc.	2,398 86
Fuel, light, cleaning, etc.	6,076 84
Salaries and wages	6,671 85
Repairs	3,792 15
Other expenses	3,317 52
Medicine and medical comforts..	387 92
Taxes and insurance	
Laundry	
Total	$32,244 72
Government aid for 1921	$3,350 65

HILLCREST CONVALESCENT HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	24
Admitted	185
Total number of inmates ..	209
Discharged	185
Died	....
In residence, 30th September, 1921	24
	209

Places Admitted From.

City of Toronto	189
County of York	....
Other counties	13
Immigrants, foreigners, etc	7
	209

Sex.

Male	3
Female	206
	209

Receipts.

From the Province of Ontario ..	$166 15
From the City of Toronto	914 50
Payment from inmates	13,986 16
Income from property belonging to the Home	.....
Subscriptions and donations	.....
Received from all other sources not enumerated above	5 45
Total	$15,072 26

Expenditures.

Food of all kinds	$6,783 90
Furnishings, etc.	479 84
Fuel, light and cleaning	1,385 31
Salaries and wages	4,206 00
Ordinary repairs, etc.	752 97
Other expenses	1,416 17
Medicine and medical comforts .	19 17
Taxes and insurance	26 75
Repairs, additions	.....
Total	$15,070 11
Government aid for 1921	$178 00

HOUSE OF INDUSTRY, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	98
Admitted	147
Total number of inmates ..	245
Discharged	94
Died	24
In residence, 30th September, 1921	127
	245

Places Admitted From.

City of Toronto	245
County of York and other counties	....
Immigrants and foreigners	....
	245

Sex.

Male	166
Female	79
	245

Receipts.

From the Province of Ontario ..	$2,821 61
From the City of Toronto	166,272 20
From inmates	1,739 90
Income from property belonging to the House	2,985 54
Subscriptions and donations	646 00
From other sources	43 89
Bank overdraft, 1st October, 1921	43,594 55
Total	218,103 69

Expenditures.

Food of all kinds	$9,085 46
Clothing, furniture and furnishings	363 52
Fuel, light and cleaning	4,286 17
Salaries and wages	4,115 42
Repairs	1,604 80
Outdoor and casual poor	180,496 72
Other expenditures	1,457 89
Medicine and medical comforts ..	152 40
Advertising and printing	31 25
Taxes and insurance	.....
Bank overdraft, Oct. 1st, 1920 .	16,510 06
Total	$218,103 69
Government aid for 1921	$4,120 40

HOUSE OF PROVIDENCE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	340
Admitted	396
Total number of inmates	736
Discharged	297
Died	48
In residence, 30th September, 1921	391
	736

Places Admitted From.

City of Toronto	675
County of York	....
Other counties in Ontario	61
Immigrants and foreigners	....
	736

Sex.

Male	428
Female	308
	736

Receipts.

From the Province of Ontario	$9,536 17
From the City of Toronto	18,000 00
Other municipalities	.....
From inmates, in payment of board	18,165 97
Subscriptions, donations and bequests of private individuals	29,344 51
From other sources	17,558 65
Income from property	618 81
Total	$93,224 11

Expenditures.

Food of all kinds	$46,422 31
Clothing, furniture and furnishings	9,212 36
Fuel, light and cleaning	18,481 22
Salaries and wages	6,138 41
Drugs and medicines	1,637 86
Ordinary repairs	9,949 59
Other expenditures	5,455 73
Taxes and insurance	262 16
Total	$97,559 64
Government aid for 1921	$14,148 50

HUMEWOOD HOUSE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	21
Admitted	45
Total number of inmates	66
Discharged	46
Died	1
In residence, 30th September, 1921	19
	66

Places Admitted From.

City of Toronto	50
County of York	3
Other counties of Ontario	13
Immigrants, foreigners, etc.	....
	66

Sex.

Male (infants)	16
Female	50
	66

Receipts.

From the Province of Ontario	$286 69
From inmates	325 19
Subscriptions, donations of private individuals	.....
From other sources	2,122 47
From Federation of Charities	5,277 34
Total	$8,011 69

Expenditures.

Food of all kinds	$1,559 35
Clothing, furnishings, etc	368 71
Fuel, light, cleaning, etc	805 58
Salaries and wages	1,670 00
Repairs	653 94
Other expenses	3,071 55
Medicine and medical comforts	80 80
Total	$8,209 93
Government aid for 1921	$352 50

JEWISH OLD FOLKS HOME, TORONTO.

Full particulars of the operations of this institution will be found in the annexed summaries:

Movements of Inmates

In residence, 1st. October, 1920	34
Admitted	7
Total number of inmates	41
Discharged	
Deaths	10
In residence, 30th September, 1921	31
	41

Places Admitted From.

City of Toronto	41
County of York and other counties	
Immigrants, etc.	
	41

Sex.

Male	16
Female	25
	41

Receipts.

From the Province of Ontario	
From the City of Toronto	
From inmates	
Subscriptions and donations	13,000 00
From other sources	
Industry (sewing)	
Total	$13,000 00

Expenditures.

Food of all kinds	$4,122 50
Clothing, furnishings, etc	873 56
Fuel, light, cleaning, etc	1,542 74
Salaries and wages	4,620 00
Repairs	45 79
Rent	
Drugs and medicines	684 56
Other expenses	2,238 60
Total	$14,127 75
Government aid for 1921	$1,056 40

INDUSTRIAL REFUGE, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	58
Admitted	10
Total number of inmates	68
Discharged	14
Died	....
In residence, 30th September, 1921	54
	68

Places Admitted From.

City of Toronto	54
County of York and other counties	14
Immigrants, foreigners, etc.	....
	68

Sex.

Female	68
	68

Receipts.

From the Province of Ontario	$1,797 66
From the City of Toronto	909 00
Payments from inmates	1,125 55
Subscriptions, donations, etc.	128 67
Laundry, sewing, etc	20,726 01
Other sources	400 90
Federation community service	4,978 53
Total	$30,066 32

Expenditures.

Food of all kinds	$5,627 64
Clothing and furnishings	1,110 17
Fuel, light and cleaning	4,663 84
Salaries and wages	7,073 70
Repairs, ordinary	987 46
Medicine and medical comforts	2 00
Other expenses	4,648 66
Laundry expenses	4,978 61
Total	$29,092 08
Government aid for 1921	$2,044 00

THE JULIA GREENSHIELDS HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 ..	31
Admitted	3
Total number of inmates ..	34
Discharged	1
Died	2
In residence, 30th September, 1921	31
	34

Places Admitted From.

City of Toronto	31
County of York	....
Other counties	3
	34

Sex.

Female	34
	34

Receipts.

From the Province of Ontario ..	$852 92
From the City of Toronto	400 00
Payments from inmates	6,385 67
Income from property belonging to the Home	294 26
Subscriptions, donations	6,415 24
Other sources	....
Total	$14,348 09

Expenditures.

Food of all kinds	$4,672 53
Clothing and furnishings	1,116 80
Fuel, light and cleaning	1,716 74
Salaries and wages	2,821 40
Repairs	905 22
Other expenses	2,698 73
Medicine and medical comforts .	66 41
Repairs, additions	....
Total	$13,997 83
Government grant for 1921	$1,087 00

S.A. RESCUE HOME, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920 .	56
Admitted	502
Total number of inmates ..	558
Discharged	467
Deaths	13
In residence, 30th September, 1921	78
	558

Places Admitted From.

City of Toronto	431
County of York and other counties	104
Immigrants, etc.	23
	558

Sex.

Male	72
Female	486
	558

Receipts.

From the Province of Ontario ..	$836 05
From the City of Toronto	564 00
From inmates	3,588 92
Subscriptions and donations	202 57
From other sources	4,448 09
Industry (sewing)	....
Total	$9,639 63

Expenditures.

Food of all kinds	$3,784 49
Clothing, furnishings, etc.	1,228 38
Fuel, light, cleaning, etc.	1,600 48
Salaries and wages	4,407 75
Repairs	....
Rent	2,640 00
Drugs and medicines	129 59
Other expenses	1,940 02
Total	$15,730 71
Government aid for 1921	$1,931 55

VICTOR HOME FOR YOUNG WOMEN, TORONTO.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	26
Admitted	116
Total number of inmates	142
Discharged	113
Deaths	....
In residence, 30th September, 1921	29
	142

Places Admitted From.

City of Toronto	124
Immigrants, foreigners, etc.	18
Other counties of Ontario	
County of York	
	142

Sex.

Female	17
Male (infants)	125
	142

Receipts.

From the Province of Ontario	$779 55
From the City of Toronto	427 00
From inmates	328 50
Subscriptions, donations of private individuals	154 00
From other sources	5,076 65
Income from property	180 00
Total	$6,945 70

Expenditures.

Food of all kinds	$2,001 32
Clothing, furnishings, etc.	....
Fuel, light, cleaning, etc.	686 74
Salaries and wages	1,235 00
Repairs	269 19
Other expenses	2,753 45
Total	$6,945 70
Government aid for 1921	$766 60

HOME FOR THE FRIENDLESS, WINDSOR.

Full particulars of the operations of this Institution will be found in the annexed summaries:

Movements of Inmates.

In residence, 1st October, 1920	29
Admtited	22
Total number of inmates	51
Discharged	16
Died	2
In residence, 30th September, 1921	33
	51

Places Admitted From.

City of Windsor	51
County of Essex	....
Immigrants, foreigners, etc.	....
	51

Sex.

Male	24
Female	27
	51

Receipts.

From the Province of Ontario	$880 09
From the City of Windsor	4,350 00
From inmates	175 50
Subscriptions and donations	....
Other sources	80 31
Total	$5,485 90

Expenditures.

Food of all kinds	$3,114 18
Clothing and furnishings	184 17
Fuel, light and cleaning	377 14
Repairs, ordinary	181 14
Salaries and wages	1,123 00
Other expenses	230 76
Medicine and medical comforts	105 56
Total	$5,313 61
Government aid for 1921	$1,111 60

ORPHAN ASYLUMS

The statistical tables on the following pages of this report show an increase in the contributions to several of the Institutions, while in some cases there is a falling off as compared with last year.

The total number of children cared for in the Orphanages during the year was 4,946, as compared with 4,951 in 1920.

In the tables will be found full details of the receiving and discharging of children, etc.

The statistics relating to the sex and previous residence of the inmates are given in the following summary:

Sex.

Male	2,329
Female	2,617
	4,946

Previous Residence.

Received from cities in which Orphanages are located	3,305
Received from counties in which Orphanages are located	257
Received from other counties in the Province	1,230
Immigrants and foreigners and unknown	154
	4,946

TABLE I.—Schedule C–Orphanages.

Name of Orphanage	Location	No. in residence 1st October, 1920	Number admitted during the year ending 30th Sept., 1921.	Total number maintained during the year.	Number discharged during the year.	Number of deaths during the year.	Number remaining in residence on 30th September, 1921.
Nazareth Orphanage	Cornwall	52	41	93	49	.....	44
St. Joseph's Orphanage	Fort William.	111	96	207	107	.....	100
Boys' Home	Hamilton	9	31	99	33	.....	66
Girls' Home	"	46	21	67	17	.....	50
Home for the Friendless and Inf. Home	"	76	141	217	129	4	84
St. Mary's Orphan Asylum	"	96	135	231	95	.....	136
Salvation Army Rescue Home	"	30	87	117	88	2	27
Orphan's Home and Widow's Friend Soc.	Kingston	48	54	102	56	.....	46
St. Mary's of the Lake Orphanage	"	103	59	162	71	.....	91
Kitchener Orphanage	Kitchener	24	36	60	31	.....	29
Protestant Orphan's Home	London	48	67	115	63	.....	52
Roman Catholic Orphan's Home	"	130	152	282	97	14	171
S. A. Rescue Home & Childrens Shelter.	"	46	130	176	130	10	36
Ottawa Boys' Home	Ottawa	9	19	28	11	.....	17
Protestant Infants Home	"	32	53	85	38	6	41
Protestant Orphans Home	"	69	44	113	48	.....	65
St. Joseph's Orphanage	"	251	172	423	182	.....	241
St. Patricks Orphan Asylum	"	109	66	175	73	.....	102
Salvation Army Rescue & Child. Home.	"	63	164	227	147	3	77
St. Vincent's Orphanage	Peterborough	45	43	88	49	.....	39
Loyal True Blue Orphanage	Picton	66	44	110	44	.....	66
St. Agatha Orphans Home	St. Agatha	63	46	109	43	.....	66
Protestant Orphans Home	St. Catharines	14	38	52	28	.....	24
Boys Home	Toronto	58	34	92	28	.....	64
Girls Home	"	64	55	119	56	.....	63
Infants Home and Infirmary	"	108	451	559	405	2	152
Protestant Orphans Home	"	88	78	166	89	.....	77
St. Mary's Infants Home	"	52	192	244	154	20	70
Sacred Heart Orphanage	"	203	108	311	112	.....	199
Working Boys' Home	"	39	78	117	91	.....	26
Totals for 1921		2,211	2,735	4,946	2,564	61	2,321
Totals for 1920		2,137	2,814	4,951	2,621	142	2,188

TABLE II.—Schedule C—Orphanages.

Name of Orphanage	Location	Aggregate stay of inmates.	Total expenditure on maintenance account for the year ending 30th September, 1921.	Average cost per inmate per day
Nazareth Orphanage	Cornwall	17,651	$5,460 65	0.31
St. Joseph's Orphanage	Fort William	39,530	21,8 09	55
Boys Home	Hamilton	25,616	14,032 79	55
Girls Home	"	16,443	8,821 20	54
Home for the Friendless and Infant's Home	"	29,368	15,326 29	52
St. Mary's Orphan Asylum	"	44,328	18,604 36	42
Salvation Army Rescue Home	"	11,804	7,890 24	67
Orphans' Home and Widows' Friend Society	Kingston	18,088	9,829 87	54
St. Mary's of the Lake Orphanage	"	35,076	11,789 02	34
Kitchener Orphanage	Kitchener	9,719	4,190 60	43
Protestant Orphans Home	London	16,333	12,534 52	77
Roman Catholic Orphans Home	"	56,851	21,419 17	38
Salvation Army Rescue Home and Children's Shelter	"	15,892 *	.....	.....
Ottawa Boys Home	Ottawa	5,099	4,544 76	89
Protestant Infants Home	"	12,313	13,457 39	1 09
Protestant Orphans Home	"	22,781	15,844 16	70
St. Joseph's Orphanage	"	88,289	31,654 70	36
St. Patrick's Orphan Asylum	"	39,447 †	.....	.....
Salvation Army's Rescue and Children's Home	"	24,422	17,567 23	72
St. Vincent's Orphanage	Peterborough	15,780	4,805 74	30
Loyal True Blue Orphanage	Picton	24,428	10,769 86	44
St. Agatha Orphans Home	St. Agatha	25,446	4,822 26	19
Protestant Orphans Home	St. Catharines	7,909	9,385 04	1 19
Boys Home	Toronto	21,653	17,225 82	79
Girls Home	"	23,334	15,078 71	64
Infants Home and Infirmary	"	48,945	50,734 91	1 04
Protestant Orphans Home	"	34,606	46,662 50	1 35
St. Mary's Infants Home	"	25,257	48,969 20	1 93
Sacred Heart Orphanage	"	78,763	50,204 66	64
Working Boys Home	"	10,338	11,479 56	1 11
Totals for 1921		845,509	$504,914 74	60
Totals for 1920		790,548	462,905 93	60

* Included in Bethesda Hospital Returns.
† Included in Refuge Branch.

TABLE III.—Schedule–C Orphanages.

Name of Orphanage.	Location	Collective days' stay upon which computation of Orphanage rate is based.	Collective days' stay upon which computation of Refuge rate is based.	Amount received from all sources other than Government.	Computations at five (5) cents per day, being Orphanage rate.	Computations of ten (10) cents per day, being Refuge rate for adults.	Total Government grant for the year 1921.
Nazareth Orphanage	Cornwall	17,651		$4,983 43	$882 55		$882 55
St. Joseph's Orphanage	Fort William	39,530		14,808 40	1,976 50		1,976 50
Boys Home	Hamilton	25,616		13,294 09	1,280 80		1,280 80
Girls Home	"	16,443		7,649 56	822 15		822 15
Home for the Friendless and Infants Home	"	17,884	6,636	14,119 72	894 20	663 60	1,557 80
St. Mary's Orphan Asylum	"	44,328		17,687 46	2,216 40		2,216 40
Salvation Army Rescue Home	"	1,550	5,771	8,445 44	77 50	577 10	654 60
Orphans' Home and Widows' Friend Society	Kingston	18,088		9,343 17	904 40		904 40
St. Mary's of the Lake Orphanage	"	35,076		10,913 04	1,753 80		1,753 80
Kitchener Orphanage	Kitchener	9,719		5,082 96	485 95		485 95
Protestant Orphans Home	London	16,333		13,459 58	816 65		816 65
Roman Catholic Orphans Home	"	56,851	7,764	20,017 05	2,842 55		2,842 55
Salvation Army Rescue Home and Children's Shel.	"	1,008		41,484 85	50 40	776 40	826 80
Ottawa Boys Home	Ottawa	5,099		4,925 62	254 95		254 95
Protestant Infants Home	"	12,313		28,128 63	615 65		615 65
Protestant Orphans Home	"	22,781		14,652 90	1,139 05		1,139 05
St. Joseph's Orphanage	"	88,289		29,372 12	4,414 45		4,414 45
St. Patrick's Orphan Asylum	"	39,447		*	1,972 35		1,972 35
Salvation Army Rescue and Children's Home	"	9,443	8,553	13,504 29	472 15	855 30	1,327 45
St. Vincent's Orphanage	Peterborough	15,780		3,869 27	789 00		789 00
Loyal True Blue Orphanage	Picton	24,428		10,955 05	12,221 40		1,221 40
St. Agatha Orphans Home	St. Agatha	25,446		4,003 47	1,272 30		1,272 30
Protestant Orphans Home	St. Catharines	7,909		9,214 51	395 45		395 45
Boys Home	Toronto	21,653		10,434 48	1,082 65		1,082 65
Girls Home	"	23,334		15,054 50	1,166 70		1,166 70
Infants Home and Infirmary	"	39,585	93.60	48,004 64	1,979 25	936 00	2,915 25
Protestant Orphans Home	"	34,606		44,910 91	1,730 30		1,730 30
St. Mary's Infants Home	"	16,215	90.42	46,544 60	810 75	904 20	1,714 95
Sacred Heart Orphanage	"	71,529	7,234	38,405 62	3,576 45	723 40	4,299 85
Working Boys Home	"	10,338		11,042 27	516 90		516 90
Totals for 1921		768,272	54,360	$514,311 63	384,13 60	$5,436 00	$43,849 60
Totals for 1920		731,085	47,997	466,445 01	20,111 07	3,702 00	23,813 07

* Included in Refuge Branch.

SEPARATE REPORTS

NAZARETH ORPHANAGE, CORNWALL.

The following summaries show the operations of the Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1920	52
Admitted	41
Total number of inmates	93
Discharged	49
Died	....
In residence, 30th September, 1921	44
	93

Sex.

Male	44
Female	49
	93

Places Admitted From.

Town of Cornwall	50
County of Stormont	41
Other counties and countries	2
Immigrants, etc	....
	93

The revenue of the home including the Government grant of $502.41 was $4,983.43 and the expenditure $5,485.84.

Government aid for 1921, $882.55.

ST. JOSEPH'S ORPHANAGE, FORT WILLIAM.

The following summaries show the operations of this Charity during the year:

Movements of Inmates

In residence, 1st October, 1920	111
Admitted	96
Total number of inmates	207
Dicharged	107
Died	....
In residence, 30th September, 1921	100
	207

Sex.

Male	121
Female	86
	207

Places Admitted From.

District of Thunder Bay	....
Fort William	45
Other counties in the Province	118
Immigrants, etc	44
	207

The revenue of the Home, including the Government grant of $1048,88, was $14,808.40 and the expenditure, $21,809 53.

Government aid for 1921, $1,976.50.

PROTESTANT ORPHAN ASYLUM, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1920	....
Admitted	....
Total number of inmates	....
Discharged	....
Deaths	....
In residence, 30th September, 1921	....
	....

Sex.

Male	....
Female	....
	....

Places Admitted From.

City of Hamilton	....
County of Wentworth and other counties	....
	....

The receipts and expenditures are included in the financial statements of the Aged Women's Home *vide* Schedule "B," Refuge Report.

Government aid for 1921 ———.

BOYS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920 .	68
Admitted	31
Total number of inmates ..	99
Discharged	33
In residence, 30th September, 1921	66
	99

Places Admitted From.

Hamilton City	99
County of Wentworth	....
	99

The receipts of the Home during the year, including the Government grant of $631.61, were $13,294.09, and the expenditures were $14,032.79.

Government aid for 1921, $1,280.80.

GIRLS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920.	46
Admitted	21
Total number of inmates ..	67
Discharged	17
Number of deaths	....
In residence, 30th September, 1921	50
	67

Places Admitted From.

City of Hamilton	30
County of Wentworth	..37
	67

The revenue of the Home during the year, including the Government grant of $446.95 was $7,649.56, and the expenditure was $8,821.20.

Government aid for 1921, $822.15.

HOME FOR THE FRIENDLESS AND INFANTS' HOME, HAMILTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920 .	76
Admitted	141
Total number of inmates ..	217
Discharged	129
Died	4
In residence, 30th September, 1921	84
	217

Sex.

Male	78
Female	139
	217

Places Admitted From.

City of Hamilton	181
County of Wentworth	14
Other places and counties	3
Aliens	19
	217

The revenue of the Home, including Government grant of $1,008.01, was $14,119.72, and the expenditure, $15,258.81.

Government aid for 1921, $1,557.80.

ST. MARY'S ORPHAN ASYLUM, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.	
In residence, 1st October, 1920	96
Admitted	135
Total number of inmates	231
Discharged	95
Died	..
In residence, 30th September, 1921	136
	231

Sex.	
Male	127
Female	104
	231
Places Admitted From.	
City of Hamilton	191
County of Wentworth	7
Other counties and countries	33
	231

Including the Government grant of $1,010.36, the revenue of the Asylum during the year amounted to $17,687.46, and the expenditure to $18,604.36.

Government aid for 1921, $2,216.40.

THE SALVATION ARMY RESCUE HOME, HAMILTON.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.	
In residence, 1st October, 1920	30
Admitted	87
Total number of inmates	117
Discharged	88
Died	2
In residence, 30th September, 1921	27
	117

Sex.	
Male	28
Female	89
	117
Places Admitted From.	
City of Hamilton	76
County of Wentworth	....
Other counties and countries	41
Aliens, etc	....
	117

The revenue of this Asylum for the year, including the Government grant of $495.64, amounted to $8,445.44, and the expenditure to $7,890.24.

Government aid for 1921, $654.60.

ORPHANS' HOME, KINGSTON.

The following summaries show the operations of this Institution during the year:

Movements of Inmates.	
In residence, 1st October, 1920	48
Admitted	54
Total number of inmates	102
Discharged	56
Died	....
In residence, 30th September, 1921	46
	102

Sex.	
Male	53
Female	49
	102
Places Admitted From.	
City of Kingston	55
County of Frontenac	32
Other counties in Ontario	15
Immigrants, foreigners, etc	....
	102

The revenue of this Home for the year, including the Government grant of $554.36, was $9,343.17, and the expenditures was $9,829.87.

Government aid for 1921, $904.40.

ST. MARY'S OF THE LAKE ORPHANAGE, KINGSTON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920	103
Admitted	59
Total number of inmates	162
Discharged	71
Died	....
In residence, 30th September, 1921	91
	162

Sex.

Male	94
Female	68
	162

Places Admitted From.

City of Kingston	67
County of Frontenac	6
Other counties	89
Immigrants, etc	....
	162

The income of the Asylum during the year, including the Government grant of $959.30, amounted to $11,884.39, and the expenditure to $11,789.02.

Government aid for 1921, $1,753.80.

KITCHENER ORPHANAGE, KITCHENER.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1920	24
Admitted	36
Total number of inmates	60
Discharged	31
Died	....
In residence, 30th September, 1921	29
	60

Sex.

Male	34
Female	26
	60

Places Admitted From.

Town of Kitchener	26
County of Waterloo	33
Counties in Ontario	.
Immigrants, etc	1
	60

The revenue of the Home, including the Government grant of $269.57, was $5,082.96, and the expenditures were $4,190.60.

Government aid for 1921, $485.95.

PROTESTANT ORPHANS' HOME, LONDON

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1920	48
Admitted	67
Total number of inmates	115
Discharged	63
Died	....
In residence, 30th September, 1921	52
	115

Sex.

Male	57
Female	58
	115

Places Admitted From.

City of London	115
Other counties	....
	115

The revenue of the Home, including the Government grant of $353.66, was $13,459.58, and the expenditures were $12,534.52.

Government aid for 1921, $816.65.

ROMAN CATHOLIC ORPHANS' HOME, LONDON.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.	
In residence, 1st October, 1920	130
Admitted	152
Total number of inmates	282
Discharged	97
Died	14
In residence, 30th September, 1921	171
	282

Sex.	
Male	115
Female	167
	282
Places Admitted From.	
City of London	60
County of Middlesex	8
Other parts of the Province	214
	282

The revenue of the Home during the year, including the Government grant of $1,422.51, amounted to $20,017.05, and the expenditures to $21,419.17.

Government aid for the year 1921, $2,842.55.

S. A. RESCUE HOME AND CHILDREN'S SHELTER, LONDON.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920	46
Admitted	130
Total number of inmates	176
Discharged	130
Died	10
In residence, 30th September, 1921	36
	176

Sex.	
Male	58
Female	118
	176
Places Admitted From	
City of London	7
Middlesex and other counties	15
Immigrants, foreigners, etc	154
	176

The receipts and expenditures of this Home are included in the financial statements of the Bethesda Hospital.

Government aid for 1921, $826.80.

BOYS' HOME, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920	9
Admitted	19
Total number of inmates	28
Discharged	11
Died	....
In residence, 30th September, 1921	17
	28

Sex.	
Male	28
Female	....
	28
Places Admitted From.	
City of Ottawa	26
County of Carleton	....
Other counties in Province	....
Immigrants, foreigners, etc	2
	28

The revenue of the Home during the year, including Government grant of $115.54, amounted to $4,925.62, and the expenditures to $4,544.76.

Government aid for 1921, $254.95.

ORPHANS' HOME, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920	69
Admitted	44
Total number of inmates	113
Discharged	48
Died	....
In residence, 30th September, 1921	65
	113

Sex.

Male	50
Female	63
	113

Places Admitted From.

City of Ottawa	94
County of Carleton	14
Other counties	4
Immigrants, etc	1
	113

The receipts and expenditures are included in the financial statement of the Refuge Branch of the Orphan's Home, Ottawa. See Schedule "B," Refuge Report.

Government aid for 1921, $1,139.05.

ST. JOSEPH'S ORPHAN ASYLUM, OTTAWA.

The following summaries show the operations of this Charity during the year:

Movements of Inmates.

In residence, 1st October, 1920	251
Admitted	172
Total number of inmates	423
Discharged	182
Died	....
In residence, 30th September, 1921	241
	423

Sex.

Male	198
Female	225
	423

Places Admitted From.

City of Ottawa	221
County of Carleton	12
Other counties in Ontario	190
	423

The receipts of the Institution, including the Government grant of $2,383.46, were $29,372.12, and the expenditures $31,654.70.

Government aid for 1921, $4,414.45.

ST. PATRICK'S ORPHAN ASYLUM, OTTAWA.

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1920	109
Admitted	66
Total number of inmates	175
Discharged	73
Died	....
In residence, 30th September, 1921	102
	175

Sex.

Male	102
Female	73
	175

Places Admitted From.

City of Ottawa	141
County of Carleton	9
Other parts of Province	22
Other counties	3
	175

The receipts and expenditures of this Institution are included in the financial statement of the Refuge Department; *vide* Schedule "B," Refuge Report.

Government aid for 1921, $1,972.35.

THE PROTESTANT INFANTS' HOME, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920	32
Admitted	53
Total number of inmates	85
Discharged	38
Died	6
In residence, 30th September, 1921	41
	85

Sex.	
Male	46
Female	39
	85

Places Admitted From.	
City of Ottawa	63
County of Carleton	18
Other Counties in Province	
Immigrants, foreigners, etc	4
	85

The revenue of the Home during the year, including the Government grant of $228.30, amounted to $28,128.63, and the expenditures to $33,457.39.

Government aid for 1921, $615.65.

S. A. RESCUE HOME AND CHILDREN'S SHELTER, OTTAWA.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920	63
Admitted during the year	164
Total number of inmates	227
Discharged	147
Died	3
In residence, 30th September, 1921	77
	227

Sex.	
Male	78
Female	149
	227

Places Admitted From.	
City of Ottawa	192
County of Carleton	8
Other counties	22
Immigrants, foreigners, etc	5
	227

The revenue of the Home, including Government grant of $846.33, was $13,504.29, and the expenditures were $17,567.23.

Government aid for 1921, $1,327.45.

ST. VINCENT'S ORPHANAGE, PETERBOROUGH.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920	45
Admitted	43
Total number of inmates	88
Discharged	49
Number of deaths	
In residence, 30th September, 1921	39
	88

Sex.	
Male	44
Female	44
	88

Places Admitted From.	
City of Peterborough	56
County of Peterborough	
Other counties in the Province	32
	88

The revenue of the Home, including the Government grant of $425.35, during the year was $3,869.27, and the expenditures were $4,805.74.

Government aid for 1921, $789.00.

LOYAL TRUE BLUE ORPHANAGE, PICTON.

The following summaries show the operations of this Orphanage during the year:

Movements of Inmates.

In residence, 1st October, 1920	66
Admitted	44
Total	110
Discharged	44
Died	....
In residence, 30th September, 1921	66
	110

Sex.

Male	50
Female	60
	110

Places Admitted From.

City of Toronto	29
County of Prince Edward	....
Other counties of Ontario	81
Aliens	....
	110

The revenue of the Home, including the Government grant of $676.31, was $10,955.05, and the expenditures were $10,769.86.

Government aid for 1921, $1,221.40.

ST. AGATHA ORPHAN ASYLUM, ST. AGATHA

The following summaries show the operations of this Asylum during the year:

Movements of Inmates.

In residence, 1st October, 1920	63
Admitted	46
Total number of inmates	109
Discharged	43
Died	....
In residence, 30th September, 1921	66
	109

Sex.

Male	60
Female	49
	109

Places Admitted From.

County of Waterloo	109
Other counties	....
Aliens	....
	109

The revenue of the Asylum was $4,003.47, including the Government grant of $700.00, and the expenditure, $4,822.26.

Government aid for 1921, $1,272.30.

PROTESTANT HOME (ORPHANAGE BRANCH), ST. CATHARINES.

The following summaries show the operations of this Charity during the year:

Movements of Inmates.

In residence, 1st October, 1920	14
Admitted	38
Total number of inmates	52
Discharged	28
Died	....
In residence, 30th September, 1921	24
	52

Sex.

Male	35
Female	17
	52

Places Admitted From.

City of St. Catharines	50
County of Lincoln	2
Other counties	....
Aliens	....
	52

The revenue of the Home during the year, including the Government grant of $211.94, amounted to $9,214.51, and the expenditure, $9,385.04.

Government aid for 1921, $395.45.

BOYS' HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920 .	58
Admitted	34
Total number of inmates ..	92
Discharged	28
Died	....
In residence, 30th September, 1921	64
	92

Places Admitted From.

City of Toronto	92
County of York	....
Counties of Ontario	....
Immigrants, foreigners, etc	....
	92

The receipts of the Home during the year, including the Government grant of $597.91, amounted to $16,111.47, and the expenditures were $17,225.82.

Government aid for 1921, $1,082.65.

GIRLS' HOME, TORONTO

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920 .	64
Admitted	55
Total number of inmates ..	119
Discharged	56
Died	....
In residence, 30th September, 1921	63
	119

Places Admitted From.

City of Toronto	119
County of York	
Other parts of Ontario	
	119

The receipts of the Institution during the year, including the Government grant of $622.22, amounted to $15,054.50, and the expenditure, $15,078.71.

Government aid for 1921, $1,166.70.

THE INFANTS' HOME AND INFIRMARY, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.

In residence, 1st October, 1920 .	108
Admitted	451
Total number of inmates ..	559
Discharged	405
Died	2
In residence, 30th September, 1921	152
	559

Sex.

Male	252
Female	307
	559

Places Admitted From.

City of Toronto	410
County of York	16
Other counties in Ontario	76
Immigrants, foreigners, etc	57
	559

The receipts of the Home during the year, including the Government grant of $2,034.43, were $48,004.64, and the expenditures were $50,734.91.

Government aid for the year 1921, $2,915.25.

ST. MARY'S INFANTS' HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates.	
In residence, 1st October, 1920.	52
Admitted	192
Total number of inmates ..	244
Discharged	154
Died	20
In residence, 30th September, 1921	70
	244

Sex.	
Male	74
Female	170
	244
Places Admitted From.	
County of York	137
City of Toronto	....
Other counties in Ontario	102
Immigrants, foreigners, etc	5
	244

The receipts of the Home during the year, including the Government grant of $869.14, were $47,413.74, and the expenditures were $48,969.20.

Government aid for 1921, $1,714.95.

PROTESTANT ORPHANS' HOME, TORONTO.

The following summaries show the operations of this Institution during the year:

Movements of Inmates.	
In residence, 1st October, 1920 .	88
Admitted	78
Total number of inmates ..	166
Discharged	89
Died	....
In residence, 30th September, 1921	77
	166

Sex.	
Male	99
Female	67
	166
Places Admitted From.	
City of Toronto	161
Immigrants, foreigners, etc	5
Other parts of Ontario	.
	166

The receipts of the Institution during the year, including the Government grant of $900.13, were $45,811.04, and the expenditures were $46,662.50.

Government aid for the year 1921, $1,730.30.

ROMAN CATHOLIC ORPHAN ASYLUM, TORONTO.

The following summaries show the operations of this Orphanage during the year;

Movements of Inmates.	
In residence, 1st October, 1920 .	203
Admitted	108
Total number of inmates ..	311
Discharged	112
Died	...
In residence, 30th September, 1921	199
	311

Sex.	
Male	162
Female	149
	311
Places Admitted From.	
City of Toronto	304
County of York	1
Other parts of Ontario	6
Immigrants, foreigners, etc	.
	311

The receipts of the Institution during the year, including the Government grant of $2,517.01, were $40,922.63, and the expenditures were $50,204.66.

Government aid for the year 1921, $4,299.85.

THE WORKING BOY'S HOME, TORONTO.

The following summaries show the operations of this Home during the year:

Movements of Inmates

In residence 1st October, 1920 .	39
Admitted	78
Total number of inmates ..	117
Discharged	91
Died	....
In residence, 30th September, 1921	26
	117

Sex.

Male.....	117
	117

Places Admitted From.

City of Toronto	106
County of York	2
Counties of Ontario	5
Aliens	
	117

The receipts of the Home during the year, including the Government grant of $357.81, amounted to $11,400.08, and the expenditures were $11,479.56.

Government aid for the year 1921, $516.90.

COUNTY HOUSES OF REFUGE

The following returns have been received from the Houses of Refuge maintained by the different Counties in Ontario. These returns show the approximate value of the buildings, contents and land, also the number of acres in connection with each House of Refuge. The receipts and expenditures are also stated, together with the average number of inmates in each Refuge.

COUNTY OF BRANT

Statement showing the value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$225,000 00
" " contents	4,000 00
" " land	6,750 00
Number of acres	45

Receipts

Profits of farm	$1,569 29
Received from all other sources	262 90
Amount provided out of taxation and received from Treasurer	15,817 77

Expenditures

Maintenance of House	$15,817 77
Average number of inmates	50

COUNTY OF BRUCE

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$22,000 00
" " contents	1,200 00
" " land	3,000 00
Number of acres	62

Receipts

Profits of farm	$675 65
Received from all other sources	
Amount provided out of taxation and received from Treasurer	8,420 87

Expenditures

Maintenance of House	$8,420 87
Average number of inmates	53

COUNTY OF ELGIN

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$29,520 87
" " contents	11,211 11
" " land	3,460 60
Number of acres	100

Receipts

Profits of farm	$686 50
Received from all other sources	545 59
Amount provided out of taxation and received from Treasurer	9,793 19

Expenditures

Maintenance of House	$10,165 28
Average number of inmates	35

COUNTY OF ESSEX

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$38,000 00
" " contents	2,520 00
" " land	6,500 00
Number of acres	65

Receipts

Profits of farm	$2,822 92
Received from all other sources	5,795 74
Amount provided out of taxation and received from Treasurer	9,705 29

Expenditures

Maintenance and improvements of House	$12,528 21
Average number of inmates	45

COUNTY OF GREY

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$50,000 00
" " contents	8,800 00
" " land	5,000 00
Number of acres	94

Receipts

Profits of farm	790 74
Received from all other sources	
Amount provided out of taxation and received from Treasurer	1,922 68

Expenditures

Maintenance of House	8,897 33
Average number of inmates	55

COUNTY OF HALDIMAND.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$25,000 00
" " contents	5,000 00
" " land	4,000 00
Number of acres	50

Receipts

Profits of farm	$1,465 00
Received from all other sources	490 00
Amount provided out of taxation and received from Treasurer	8,956 27

Expenditures

Maintenance of House	$10,424 22
Average number of inmates	32

COUNTY OF HASTINGS

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$75,000 00
" " contents	6,000 00
" " land, barns and machinery	20,000 00
Number of acres	73

Receipts

Profits of farm	$2,438 97
Received from all other sources	1,055 42
Amount provided out of taxation and received from Treasurer	11,758 94

Expenditures

Maintenance of House	$15,253 33
Average number of inmates	73

COUNTY OF HURON

Statement showing value of property, receipts, expenditures and average number of inmates.

Approximate value of buildings	$50,000 00
" " contents	5,000 00
" " land	4,000 00
Number of acres	47½

Receipts

Profits of farm	$2,192 50
Received from all other sources	2,393 91
Amount provided out of taxation and received from Treasurer	8,301 43

Expenditures

Maintenance of House	$16,022 44
Average number of inmates	81

COUNTY OF KENT

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	4,745 00
" " land	8,000 00
Number of acres	50

Receipts

Profits of farm	$1,190 58
Received from all other sources	3,579 08
Amount provided out of taxation and received from Treasurer	8,414 23

Expenditures

Maintenance of House	$11,993 31
Average number of inmates	44

COUNTY OF LAMBTON.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$40,000 00
" " contents	10,000 00
" " land	10,000 00
Number of acres	60

Receipts

Profits of farm	
Received from all other sources	573 24
Amount provided out of taxation and received from Treasurer	10,717 46

Expenditures

Maintenance of House	$10,717 46
Average number of inmates	40

COUNTY OF LANARK.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$36,109 77
" " contents	6,166 00
" " land	10,000 00
Number of acres	1 25

Receipts

Profits of farm	$2,614 99
Received from all other sources	6,894 48
Amount provided out of taxation and received from Treasurer	9,292 23

Expenditures

Maintenance of House	$18,801 70
Average number of inmates	74

COUNTIES OF LEEDS AND GRENVILLE

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$25,000 00
" " contents	2,000 00
" " land	5,000 00
Number of acres	100

Receipts

Profits of farm	$989 00
Received from all other sources	1,743 75
Amount provided out of taxation and received from Treasurer	7,289 96

Expenditures

Maintenance of House	$7,194 89
Average number of inmates	40

COUNTY OF LINCOLN

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$50,000 00
" " contents	8,000 00
" " land	18,000 00
Number of acres	70

Receipts

Profits of farm	$5,497 78
Received from all other sources	4,030 58
Amount provided out of taxation and received from Treasurer	7,117 72

Expenditures

Maintenance of House and improvements	$16,393 44
Average number of inmates	53

COUNTY OF MIDDLESEX

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$40,000 00
" " contents	6,000 00
" " land	11,000 00
Number of acres	110

Receipts

Profits of farm	$2,273 43
Received from all other sources	692 68
Amount provided out of taxation and received from Treasurer	14,238 51

Expenditures

Maintenance of House	$17,204 62
Average number of inmates	65

COUNTY OF NORFOLK.

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$39,000 00
" " contents	8,000 00
" " land	3,700 00
Number of acres	96

Receipts

Profits of farm	
Received from all other sources	325 00
Amount provided out of taxation and received from Treasurer	14,000 00

Expenditures

Maintenance of House	$9,128 29
Average number of inmates	66

COUNTIES OF NORTHUMBERLAND AND DURHAM

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$55,500 00
" " contents	3,000 00
" " land	4,500 00
Number of acres	45

Receipts

Profits of farm, sale of stock	$2,792 50
Received from all other sources	1,725 45
Amount provided out of taxation and received from Treasurer	15,593 65

Expenditures

Maintenance of House and permanent improvements	$20,111 60
Average number of inmates	71

COUNTY OF ONTARIO

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$28,000 00
" " contents	16,000 00
" " land	5,000 00
Number of acres	61

Receipts

Profits of farm	
Received from all other sources	1,330 65
Amount provided out of taxation and received from Treasurer	15,930 37

Expenditures

Maintenance of House	15,930 37
Average number of inmates	66

COUNTY OF OXFORD

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$40,000 00
" " contents	8,075 00
" " land	5,000 00
Number of acres	100

Receipts

Profits of farm	$2,001 38
Received from all other sources	1,148 29
Amount provided out of taxation and received from Treasurer	10,133 48

Expenditures

Maintenance of House	$12,927 78
Average number of inmates	62

COUNTIES OF PEEL AND HALTON

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings and land	$50,000 00
" " contents	2,500 00
" " land	4,000 00
Number of acres	58

Receipts

Profits of farm	443 00
Received from all other sources	952 87
Amount provided out of taxation and received from Treasurer	9,200 00

Expenditures

Maintenance of House	10,584 91
Average number of inmates	36

COUNTY OF PERTH

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$50,000 00
" " contents	3,000 00
" " land	5,000 00
Number of acres	53

Receipts

Profits of farm	$302 46
Received from all other sources	5,403 57
Amount provided out of taxation and received from Treasurer	2,400 45

Expenditures

Maintenance of House	$5,187 35
Average number of inmates	65

COUNTY OF PETERBOROUGH

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$24,500 00
" " contents	2,300 00
" " land	5,500 00
Number of acres	96

Receipts

Profits of farm	$786 26
Received from all other sources	22 50
Amount provided out of taxation and received from Treasurer	8,895 56

Expenditures

Maintenance of House	$8,100 75
Average number of inmates	39

COUNTIES OF PRESCOTT AND RUSSELL

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	10,000 00
" " land	2,500 00
Number of acres	100

Receipts

Profits of farm	$4,000 00
Received from all other sources	2,000 00
Amount provided out of taxation and received from Treasurer	12,987 63

Expenditures

Maintenance of House	17,987 63
Average number of inmates	69

COUNTY OF PRINCE EDWARD

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	10,000 00
" " land	5,000 00
Number of acres	45

Receipts

Profits of farm	$5,809 34
Received from all other sources	
Amount provided out of taxation and received from Treasurer	

Expenditures

Maintenance of House	$10,202 11
Average number of inmates	31

COUNTY OF SIMCOE

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$41,500 00
" " contents	13,001 54
" " land	6,500 00
Number of acres	100

Receipts

Profits of farm	$2,663 92
Received from all other sources	127 76
Amount provided out of taxation and received from Treasurer, including improvements	17,863 47

Expenditures

Maintenance of House	$17,200 27
Average number of inmates	71

COUNTIES OF STORMONT, DUNDAS AND GLENGARRY

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$50,000 00
" " contents	4,000 00
" " land	10,000 00
Number of acres	140

Receipts

Profits of farm	1,520 87
Received from all other sources	579 73
Amount provided out of taxation and received from Treasurer	10,557 97

Expenditures

Maintenance of House	$12,768 57
Average number of inmates	54

COUNTY OF VICTORIA

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$43,184 72
" " contents	8,856 11
" " land	8,344 77
Number of acres	70

Receipts

Profits of farm	$101 38
Received from all other sources	1,296 07
Amount provided out of taxation and received from Treasurer	15,321 27

Expenditures

Maintenance of House	$16,718 72
Average number of inmates	52

COUNTY OF WATERLOO

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$20,000 00
" " contents	5,000 00
" " land	20,000 00
Number of acres	100

Receipts

Profits of farm	$4,733 73
Received from all other sources	1,637 13
Amount provided out of taxation and received from Treasurer	25,803 58

Expenditures

Maintenance of House	$32,174 44
Average number of inmates	111

COUNTY OF WELLAND

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	5,000 00
" " land	9,000 00
Number of acres	60

Receipts

Profits of farm	
Received from all other sources	6,094 27
Amount provided out of taxation and received from Treasurer	14,105 46

Expenditures

Maintenance of House	$9,105 99
Average number of inmates	55

COUNTY OF WELLINGTON

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$41,000 00
" " contents	6,000 00
" " land	3,000 00
Number of acres	58

Receipts

Profits of farm	$485 84
Received from all other sources	796 20
Amount provided out of taxation and received from Treasurer	9,400 00

Expenditures

Maintenance of House	$6,489 57
Average number of inmates	72

COUNTY OF WENTWORTH

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$30,000 00
" " contents	6,000 00
" " land	14,000 00
Number of acres	188

Receipts

Profits of farm	$3,119 45
Received from all other sources	4,357 39
Amount provided out of taxation and received from Treasurer	6,624 65

Expenditures

Maintenance of House	6,624 65
Average number of inmates	37

COUNTY OF YORK

Statement showing value of property, receipts, expenditures, and average number of inmates.

Approximate value of buildings	$40,000 00
" " contents	5,000 00
" " land	5,600 00
Number of acres	70

Receipts

Profits of farm	$1,383 48
Received from all other sources	954 00
Amount provided out of taxation and received from Treasurer	27,400 00

Expenditures

Maintenance of House	$29,970 55
Average number of inmates	78

Fifty-fourth Annual Report

OF THE

Inspector of Prisons and Public Charities

UPON THE

Prisons and Reformatories

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 31st OCTOBER

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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1922

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PARLIAMENT BUILDINGS, TORONTO, December 16th, 1921.

To His Honour HENRY COCKSHUTT,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fifty-fourth Annual Report upon the Prisons and Reformatories being for the year ending 31st October, 1921.

I have the honour to be,

Your Honour's most obedient servant,

H. C. NIXON,

Provincial Secretary.

TORONTO, December 6th, 1921.

SIR,—I have the honour to submit herewith, to be presented to His Honour the Lieutenant-Governor, the Fifty-fourth Annual Report upon the Prisons and Reformatories of the Province of Ontario, being for the year ending 31st October, 1921.

I have the honour to be, Sir,

Your obedient servant,

W. W. DUNLOP,

Inspector.

THE HONOURABLE H. C. NIXON, M.P.P.,

Secretary of the Province of Ontario,

Toronto.

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FIFTY-FOURTH ANNUAL REPORT

UPON THE

Gaols and District Lock-ups of Ontario

In presenting the Fifty-fourth Annual Report of the Gaols and Lock-ups of Ontario, I beg to submit the following statistics for the year ending September 30th, 1921.

(1) Number of Gaols in Ontario 46
Number of Provincial Lock-ups 4

(2) Total expenditure for Gaol maintenance in Ontario:

In 1920	$273,634.17
In 1921	318,287.83
Increase	$34,653.66

(3) The cash revenue from Gaol labour during 1921 was $4,965.88, and was earned at Kingston and Ottawa.

Average cost per day for each prisoner in the County Gaols of Ontario was:

In 1920	56.03 cents
In 1921	56.88 cents.

(4) Number of persons committed to Gaols and Lock-ups during the past two years was:

In 1920	14,756
In 1921	16,800
Increase during the past year	2,044
Commitments for murder in 1920	30
Commitments for murder in 1921	38
Increase	8
Commitments for manslaughter in 1920	17
Commitments for manslaughter in 1921	33
Increase	16

Commitments for crime against the person:

In 1920	537
In 1921	719
Increase	182

Commitments for crime against property:

In 1920	4,756
In 1921	5,518
Increase	762

Commitments for crime against public morals and decency:

In 1920	484
In 1921	632
Increase	148

Commitments for crime against public order and peace:

In 1920	6,992
In 1921	7,795
Increase	803

Number of insane committed to Gaols:

In 1920	271
In 1921	281
Increase	10

Prisoners sentenced to the Penitentiary during the past year show an increase of 167 as compared with the previous year, and the number transferred to the Reformatories was 104 more than in 1920.

Number of prisoners sentenced in 1920	7,904
Number of prisoners sentenced in 1921	9,790
Increase	1,886

The percentage of sentences to commitments was:

In 1920	58.5
In 1921	58.3

The number of prisoners sentenced to terms over one year was 246 more than during the previous year.

The number confined in penal institutions of Ontario was 632 more on September 30th, 1921, than on the same date last year.

Of those committed during the year, 6,132 were married and 10,668 were single.

Habits of life of those committed to Gaols:

In 1920, number of commitments, 14,756: temperate, 6,598; percentage, 37.94.
In 1921, number of commitments, 16,800: temperate, 7,601; percentage, 45.2.
12.56 per cent. of the prisoners committed to the gaols during the past year could not read or write.

Number of days stay of prisoners:

In 1920	200,325
In 1921	236,501
Showing an increase of days	36,176

Escapes and captures:

Twenty-six prisoners escaped during the year, of whom eight were recaptured.

Deaths in Gaols:

In 1920	4
In 1921	11

COMMON GAOLS.

The following table shows the number of prisoners committed to the Common Gaols in the Province in each year, from 1st October, 1869, to 30th September, 1921.

Date of Commitment		Men over 16 years of age.	Boys under 16 years of age.	Women over 16 years of age.	Girls under 16 years of age.	Totals.
Commitments for the year ending 30th September,	1869	3,599	294	1,680	82	5,655
" "	1870	4,215	319	1,737	108	6,379
" "	1871	4,586	329	1,642	58	6,615
" "	1872	5 006	281	1 615	56	6,958
" "	1873	5 745	323	1 735	74	7,877
" "	1874	7 298	377	1 746	67	9,488
" "	1875	8,048	389	1,566	70	10,073
" "	1876	9,005	434	1,727	70	11,236
" "	1877	11,653	542	1,824	62	13,481
" "	1878	9,537	480	1,959	54	12,030
" "	1879	8,995	416	1,756	53	11,220
" "	1880	8,229	549	1,863	59	11,300
" "	1881	7,007	468	1,681	73	9,229
" "	1882	2,286	522	1,750	62	9,620
" "	1883	7,858	423	1,551	48	9,880
" "	1884	9,858	458	1,719	46	12,081
" "	1885	9 419	450	1 507	50	11,426
" "	1886	8,831	352	1,424	38	10,655
" "	1887	8,996	409	1,574	38	11,017
" "	1888	10,060	551	1,778	65	12,454
" "	1889	10,349	451	1,685	46	12,531
" "	1890	9,622	461	1,677	50	11,810
" "	1891	8,460	421	1,501	32	10 423
" "	1892	7,177	446	1,335	53	9,011
" "	1893	6,798	388	1,399	34	8,619
" "	1894	7,785	278	1,350	37	9,450
" "	1895	7,912	284	1,154	30	9,380
" "	1896	7,622	265	1,147	24	9,058
" "	1897	7,533	235	1,069	47	8,884
" "	1898	6,974	284	969	29	8,256
" "	1899	6,846	267	1,057	33	8,203
" "	1900	7,063	298	1,291	42	8,694
" "	1901	7,059	262	1,198	27	8,546
" "	1902	6,850	216	1,199	15	8,280
" "	1903	7,815	225	1,200	21	9,261
" "	1904	8,810	156	1,165	15	10,146
" "	1905	9,668	113	1,232	22	11,035
" "	1906	9,541	136	1,124	9	10,810
" "	1907	10,489	87	1,217	11	11,804
" "	1908	11,670	76	1,323	14	13,083
" "	1909	11,935	87	1,501	12	13,535
" "	1910	12,073	87	1,514	13	13,687
" "	1911	13,572	91	1,600	12	15,275
" "	1912	15,238	91	1,645	11	16,985
" "	1913	17,442	85	1,713	10	19,250
" "	1914	21,024	84	1,665	4	22,777
" "	1915	18,566	90	1,669	12	20,337
" "	1916	14,506	80	1,502	12	16,100
" "	1917	11,417	142	878	8	12,445
" "	1918	12,182	136	914	10	13,242
" "	1919	12,034	183	872	7	13,096
" "	1920	13,759	106	882	9	14,756
" "	1921	16,526	93	1,168	13	16,800

The next table shows the number of prisoners (male and female) committed to each gaol during 1920 and 1921, and the increase and decrease in the commitments of the latter year compared with the former.

Name of gaol.	Number of prisoners committed in the year ending 30th Sept., 1920.			Number of prisoners committed in the year ending 30th Sept., 1921.			Increase.			Decrease		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	74	3	77	130		130	56		56		3	3
Belleville	324	16	340	402	37	439	78	21	99			
Brantford	143	13	156	227	12	239	84		84		1	1
Brampton	47	1	48	58		58	11		11		1	1
Brockville	107	3	110	122	1	123	15		15		2	2
Bracebridge	15	3	18	33	2	35	18		18		1	1
Cayuga	29	2	31	40	2	42	11		11			
Cornwall	74	1	75	126	6	132	52	5	57			
Cobourg	80	2	82	68	6	74		4	4	12		12
Chatham	169	17	186	269	12	281	100		100		5	5
Fort Frances	135	5	140	120	9	129		4	4	15		15
Goderich	43		43	43	2	45		2	2			
Guelph	49	5	54	56	5	61	7		7			
Gore Bay	11	3	14	18	6	24	7	3	10			
Hamilton	778	77	855	879	103	982	101	26	127			
Kingston	98	8	106	99	9	108	1	1	2			
Kitchener	116	10	126	126	15	141	10	5	15			
Kenora	49	3	52	57	1	58	8		8		2	2
London	557	53	610	616	70	686	59	17	76			
Lindsay	20		20	28	3	31	8	3	11			
L'Orignal	22	3	25	21	3	24				1		1
Milton	54	3	57	100		100	46		46		3	3
Napanee	13	3	16	35	2	37	22		22		1	1
North Bay	199	16	215	327	19	346	128	3	131			
Ottawa	616	78	694	668	89	757	52	11	63			
Owen Sound	79		79	68	1	69		1	1	11		11
Orangeville	11	2	13	14	6	20	3	4	7			
Perth	59	1	60	54	3	57		2	2	5		5
Picton	18	3	21	27	3	30	9		9			
Pembroke	76	1	77	38	1	39				38		38
Peterborough	123	3	126	172	21	193	49	18	67			
Port Arthur	295	14	309	509	11	520	214		214		3	3
Parry Sound	96	5	101	154	12	166	58	7	65			
Simcoe	24	8	32	43	5	48	19		19		3	3
St. Catharines	133	11	144	249	7	256	116		116		4	4
Sarnia	92	3	95	146	8	154	54	5	59			
Stratford	79	3	82	100	7	107	21	4	25			
Sandwich	475	18	493	770	57	827	295	39	334			
St. Thomas	116	7	123	130	13	143	14	6	20			
Sault Ste. Marie	318	19	337	396	43	439	78	24	102			
Sudbury	1,282	49	1,331	1,329	38	1,367	47		47		11	11
Toronto	6,225	375	6,600	5,936	503	6,439		128	128	289		289
Walkerton	21	4	25	41	5	46	20	1	21			
Woodstock	116	6	122	155	7	162	39	1	40			
Welland	204	16	220	391	11	402	187		187		5	5
Whitby	125	6	131	153	5	158	28		28		1	1
Lock-Ups												
Atikokan				3		3	3		3			
Byng Inlet	8		8	4		4				4		4
Cobalt	65	9	74	67		67	2		2		9	9
Mine Centre	3		3	2		2				1		1
Totals	13,865	891	14,756	15,619	1,181	16,800	2,130	345	2,475	376	55	431

The number of commitments in five-year periods for the past fifteen years is shown in the subjoined tables divided into five classes:

1. CRIMES AGAINST THE PERSON

Nature of crime	1907 to 1911	1912 to 1916	1917	1918	1919	1920	1921
Assault, common	2,091	2,610	261	198	206	241	362
Assault, felonious	1,087	1,052	86	147	135	138	174
Cutting and wounding, stabbing and shooting with intent	475	546	81	63	72	52	53
Rape and assault with intent	272	289	33	30	46	44	41
Murder	144	150	32	34	46	36	38
Manslaughter	55	72	16	21	22	17	33
Attempt at suicide	123	127	5	11	16	15	18
Miscellaneous	68	382	.....	.....	.....	.....	.....
Totals	4,315	5,228	514	504	543	537	719

2. CRIMES AGAINST PROPERTY.

Nature of crime.	1907 to 1911	1912 to 1916	1917	1918	1919	1920	1921
Arson and incendiarism	134	238	28	25	28	18	27
Burglary	343	435	117	91	159	426	408
Counterfeiting and passing counterfeit money	31	20	1	2	.....	3	10
Destroying and injuring property	279	384	46	29	34	37	44
Embezzlement	44	35	.....	54	2	.....	9
Forgery	407	462	73	75	98	116	187
Fraud and obtaining money or goods under false pretenses	1,059	1,857	246	309	244	360	480
Horse, cattle and sheep stealing	234	206	45	27	35	39	22
Housebreaking and robbery	939	1,434	241	231	427	653	835
Larceny	10,548	12,059	1,445	1,981	2,031	2,166	2,280
Receiving stolen goods	267	404	46	63	72	281	260
Trespass	1,919	3,511	128	102	112	193	562
Miscellaneous	136	886	255	333	382	454	454
Totals	16,390	21,931	2,671	3,322	3,624	4,756	5,518

3. CRIMES AGAINST PUBLIC MORALS AND DECENCY.-

Nature of crime.	1907 to 1911	1912 to 1916	1917	1918	1919	1920	1921
Bigamy	159	204	60	69	57	54	46
Inmates and frequenters of houses of ill-fame	959	1,720	260	271	220	123	200
Keeping houses of ill-fame	698	1,420	155	143	99	43	77
Perjury	206	165	26	32	21	30	41
Seduction	252	255	34	46	40	46	46
Indecent assault and exposure	616	880	85	102	129	105	143
Miscellaneous	204	190	44	51	36	43	79
Totals	3,094	4,834	664	714	602	484	632

4. OFFENCES AGAINST PUBLIC ORDER AND PEACE.

Nature of crime	1907 to 1911	1912 to 1916	1917	1918	1919	1920	1921
Abusive and obscene language	160	141	12	4	4	6	10
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	1,066	1,247	245	196	245	165	176
Carrying unlawful weapons	299	339	33	38	50	65	189
Deserting employment	72	230	51	38	26	3	4
Drunk and disorderly	25,685	36,027	3,907	2,595	3,415	4,414	4,719
Deserting the Militia	.....	.....	348	421	366	44	9
Selling liquor without license, and selling or giving it to Indians	857	1,464	841	907	924	787	935
Threatening and seditious language	184	182	20	45	32	20	8
Vagrancy	10,233	15,328	1,274	1,219	1,417	1,464	1,696
Miscellaneous	322	290	57	31	19	24	29
Totals	38,878	55,248	6,788	5,494	6,498	6,992	7,795

5. OTHER CAUSES FOR WHICH PERSONS WERE DETAINED AS PRISONERS

Nature of crime	1907 to 1911	1912 to 1916	1917	1918	1919	1920	1921
Contempt of Court	306	438	49	28	23	36	46
Debtors	62	131	12	56	30	15	13
Detained as witnesses	109	192	35	15	18	32	35
Lunatics and persons dangerous to be at large	1,862	1,765	225	201	189	271	281
Non-payment of fines and costs	3	.....	.....	.....	.....	.....	.....
Want of sureties to keep the peace	333	253	10	8	15	2	2
Other offences not classified in foregoing	2,318	5,429	1,477	2,900	1,554	1,631	1,759
Totals	4,993	8,208	1,808	3,208	1,829	1,987	2,136
Total number of persons committed for the respective years	67,670	95,449	12,445	13,242	13,096	14,756	16,800

STATISTICAL TABLES

A table showing the number of commitments to each gaol for drunkenness during and the increase or decrease

Name of gaol.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Barrie	34	34	19	10	21	9	24	21	11	10	16	12	21	14	16
Belleville	49	34	18	24	25	19	16	12	13	16	12	11	20	6	12
Brantford	182	112	89	120	125	124	106	115	85	64	88	74	82	136	162
Brampton	30	17	....	9	9	11	6	2	3	4	4	4	5	3	4
Brockville	58	44	44	77	86	70	43	48	49	45	41	58	66	55	50
Bracebridge	15	19	5	5	5	4	4	3	2	3	....	5	5	9	8
Cayuga	15	22	7	....	5	6	6	9	10	13	10	19	12	5	11
Cornwall	25	14	22	27	10	24	9	11	28	21	19	12	15	18	17
Cobourg	38	22	25	11	19	18	16	12	15	20	10	16	14	12	12
Chatham	71	47	26	28	22	67	9	13	13	15	18	18	11	9	8
Fort Frances	....	....	....	....	....	....	....	....	....	....	....	....	33	....	....
Goderich	5	5	2	3	3	....	....	2	1	2	5	5	1	2	8
Guelph	10	4	14	9	23	17	7	9	9	3	13	4	13	4	6
Gore Bay	4	1	2	1	2	3	....	....	....	....	....	....	1	3	3
Hamilton	418	251	142	148	55	36	60	56	60	66	96	108	97	188	229
Kingston	120	125	87	102	72	89	49	51	50	48	31	47	40	58	62
Kitchener	17	13	4	6	7	7	10	12	10	7	4	4	11	15	10
Kenora	66	66	81	75	65	31	76	26	111	110	23	34	36	37	21
London	332	213	150	218	219	187	177	139	163	172	137	137	250	157	262
Lindsay	5	1	5	2	5	2	5	4	5	6	7	8	8	8	10
L'Orignal	....	5	1	2	1	3	2	2	....	2	2	....	3	1	3
Milton	9	9	6	4	8	3	8	3	4	2	4	4	4	8	12
Napanee	22	23	12	9	20	8	6	5	13	4	7	4	7	3	5
North Bay	35	16	14	15	7	10	5	....	4	....	3	12	5	73	99
Ottawa	326	204	182	105	111	157	152	165	137	135	224	293	221	267	247
Owen Sound	17	13	14	11	6	....	8	6	11	7	8	12	16	13	10
Orangeville	2	1	2	....	....	....	....	....	1	....	3	....	....	....	....
Perth	5	5	3	2	3	6	2	2	7	9	7	12	17	34	20
Picton	33	19	11	11	21	11	22	31	23	30	35	19	21	18	18
Pembroke	1	....	5	7	4	7	3	5	5	....	1	4	1	7	1
Peterborough	45	24	22	16	15	13	10	11	11	10	6	13	9	14	23
Port Arthur	12	4	3	4	1	3	5	12	4	2	9	8	7	50	25
Parry Sound	9	....	2	4	5	7	2	3	3	5	8	4	5	25	10
Simcoe	3	10	5	3	11	17	6	6	16	10	11	6	12	11	15
St. Catharines	24	12	9	21	17	26	23	5	17	10	15	33	21	28	20
Sarnia	108	95	27	36	69	116	57	62	49	61	48	45	71	57	69
Stratford	14	4	7	9	15	7	10	15	5	1	9	12	8	15	19
Sandwich	35	57	38	11	19	39	16	23	20	16	27	18	31	42	29
St. Thomas	20	32	12	15	19	22	13	12	8	17	23	9	6	5	8
Sault Ste. Marie	12	10	12	8	5	2	12	9	8	7	7	21	16	79	15
Sudbury	55	77	5	119	38	42	25	41	34	51	197	222	172	49	164
Toronto	2,085	1,783	1,444	1,207	960	918	790	569	592	796	1,031	1,022	1,107	1,286	1,575
Walkerton	6	7	3	13	8	21	5	3	1	4	4	....	1	1	1
Woodstock	51	34	24	38	21	29	37	35	32	31	21	39	36	41	31
Welland	16	7	13	12	11	19	17	16	14	19	20	24	23	24	87
Whitby	2	....	1	2	1	2	....	1	4	5	2	3	5	2	11
Lock-ups:															
Atikokan	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Burk's Falls	1	....	....	....	....	2	1	....	1	....	....	4	1	1	4
Byng Inlet	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cobalt	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Killarney	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Manitowaning	33	33	22	16	5	16	4	2	4	5	7	10	12	3	6
Mine Centre	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Webbwood	....	....	....	....	....	....	9	7	6	2	9	17	48	17	14
Totals	4,475	3,528	2,641	2,575	2,174	2,236	1,873	1,596	1,672	1,869	2,282	2,446	2,627	2,913	3,452

the years 1890 to 1921, both inclusive. The figures for 1920 and 1921 are compared in each place is shown.

1905.	1906.	1907.	1908.	1909.	1910.	1911	1912.	1913	1914.	1915.	1916	1917.	1918	1919.	1920.	1921	Increase 1921	Decrease 1921
27	46	58	39	29	59	51	57	64	140	73	43	6	4		3	15	12	
6	15	34	67	33	61	89	56	110	63	106	57	23	2	4	18	3		15
143	153	239	178	118	122	129	161	131	108	162	193	25	33	60	49	60	11	
8	10	5	1	5	1	10	8	14	2	11	4	4	2	1	12	3		9
50	91	86	63	40	54	59	49	83	62	56	60	12	7	19	16	13		3
13	7	3	9	6	6	3	1	3	4	1		1			1	1		
10	13	7	4	3	5	5	6	4	5	7	10	1			1	6	5	
14	7	7	12	32	16	10	9	16	27	20	9	7	6	2	11	5		6
7	18	21	16	27	36	22	35	39	36	16	60	22	2	4	1	5	4	
16	16	27	28	30	36	36	44	46	83	55	84	27	14	15	24	37	13	
42		15	15	16	28	55	57	184	149	52	42	30	10	24	1			1
14	3	1	3	18	5	8	6	13	6	13	8	2	3		1			1
12	7	6	4	5	10	7	3	9	16	14	2		4	1	2	2		
	6	2	7	2		5	1			3	4		3		1	5	4	
287	290	394	360	413	479	580	702	986	603	494	761	129	109	127	152	199	47	
59	54	66	64	83	109	90	107	135	129	203	115	28	23	26	36	43	7	
17	19	9	12	15	13	18	24	30	48	34	32	18	7	1	16	6		10
19	19	88	92	33	6	15	101	25	19	7	8	4	4	1	2	3	1	
249	248	218	328	424	325	395	361	483	500	520	473	155	196	132	166	189	23	
10	2	6	11	8	12	30	7	3	9	5	3	1	1		1	6	5	
4	2		1	1		2	1	5	2	1	1	1		3		2	2	
7	11	6	6	8	7	4	12	11	12	4	8	3	6					
8	13	12	19	21	18	21	23	25	45	18	18			3				
171	73	103	46	38	40	18	88	90	93	55	19	8	2	12	16	35	19	
338	257	338	425	380	408	307	324	248	346	281	177	391	187	69	250	180		70
5	6	10	13	15	41	73	65	18	17	24	10	10	2	2	2	3	1	
	1					1	3	1	1	1		1						
2	20	24	27	17	19	8	20	31	22	19	13		7	1	3	1		2
28	8	21	42	25	33	31	26	28	32	47	50	2	3	4	4	1		3
6	7	8	11	20	7	8	20	50	50	44	27	13	3		7	2		5
13	24	33	22	27	23	40	37	119	143	87	71	11	1	11	6	13	7	
27	67	164	183	209	195	232	301	434	444	212	111	42	17	19	92	156	64	
35	153	68	26	25	28	35	50	58	55	79	516	35	30	32	31	45	14	
12	13	28	50	37	37	39	41	8	32	25	26	2	2		4	4		
33	20	20	25	43	42	73	67	60	102	82	80	31	13	13	27	64	37	
67	73	69	59	80	92	76	90	157	237	138	132	115	42	9	30	38	8	
46	35	21	42	24	29	29	36	67	73	34	36	5	1	3	7	17	10	
19	32	29	38	23	28	32	31	65	44	31	28	116	32	7	102	119	17	
2	4	3	12	15	19	11	5	17	48	30	12	4	11	5	12	31	19	
38	18	32	47	23	32	49	66	75	73	75	39	59	32	33	80	99	19	
117	253	281	223	268	288	316	508	1,054	1,643	658	531	211	125	276	719	783	64	
1,832	1,923	2,016	2,003	2,208	2,398	2,669	2,866	3,209	3,073	2,217	1,939	2,217	1,593	2,440	2,486	2,368		118
	5	8	4	4	6	9	6	5	4	9	4	2	1	1		1	1	
22	17	24	34	31	32	41	45	52	77	69	86	9	19	27	33	32		1
32	24	23	28	21	26	29	55	60	131	110	30	95	16	18	31	90	59	
10	29	12	8	18	14	12	8	10	17	14	16	2	1	4	30	15		15
4	3	5	2		7	4		1										
5						11			4	6	3				22	17		5
					29	25	10	1	20	11	13	22	15	4	3	2		1
8		10	10	16	4	3		2										
21		9	9	8	1	2	7	20										
10		23		12	5		6	4	3	4	1	2	4	2				
16	18	56	8															
3,941	4,133	4,748	4,736	4,987	5,291	5,827	6,613	8,363	8,848	6,235	5,968	3,907	2,595	3,415	4,511	4,719	473	265

The disposition made of the persons committed to the gaols of the Province is set forth in the table printed below:

	1921
Acquitted on being brought to trial, and discharged	4,986
Discharged without trial by order of judges, magistrates and courts, including remand cases	624
Detained for want of sureties to keep the peace	5
Detained as witnesses	38
Detained as fraudulent debtors	20
Detained as lunatics, idiots and persons unsafe to be at large	237
Died before trial	5
Detained by civil processes other than above	74
Waiting trial and otherwise detained on 30th September, 1921	211
Found guilty and sentenced	9,790
Discharged under suspended sentence	810
Total number of commitments	16,800

The places of confinement to which the convicted persons were sentenced are set forth in the following statement, and similar information is given as regards the sentenced prisoners of the previous year:

	1920	1921
Sentenced to Kingston Penitentiary	273	440
do to the Industrial School	177	100
do direct to the Ontario Reformatory	723	1,266
do to the Common Goals and subsequently transferred to the Ontario Reformatory	3,386	3,290
do direct to the Reformatory for Females	73	161
do to the Common Goals and subsequently transferred to the Reformatory for Females	32	232
do to the Common Goals and there detained until the expiration of sentence	3,976	4,295
Died while undergoing sentence	3	6
Totals	8,643	9,790

The summaries given below show the nature of the offence committed by the convicted persons:

1. *Crimes against the Person.*

	Total Commitments for the year.	Number found guilty and sentenced.
Assault, common	362	189
Assault, felonious	174	82
Cutting and wounding, stabbing and shooting with intent	53	28
Rape and assault with intent	41	12
Murder	38	4
Manslaughter	33	15
Attempted suicide	18	8
Totals	719	338

2. *Crimes against Property.*

	Total Commitments for the year.	Number found guilty and sentenced.
Arson and incendiarism	27	11
Burglary	408	249
Counterfeiting and passing counterfeit money	10	7
Destroying and injuring property	44	25
Embezzlement	9	..
Forgery	187	94
Fraud and obtaining money and goods under false pretences	480	230
Horse, cattle and sheep stealing	22	10
Housebreaking and robbery	835	422
Larceny	2,280	1,236
Receiving stolen goods	260	99

	Total Commitments for the year.	Number found guilty and sentenced.
Trespass	562	332
Miscellaneous	394	50
Totals	5,518	2,765

3. *Crimes against Public Morals and Decency.*

	Total Commitments for the year.	Number found guilty and sentenced.
Bigamy	46	29
Inmates and frequenters of houses of ill-fame	200	88
Keeping houses of ill-fame	77	44
Perjury	41	26
Seduction	46	16
Indecent assault and exposure	143	71
Miscellaneous	79	28
Totals	632	302

4. *Offences against Public Order and Peace.*

	Total Commitments for the year.	Number found guilty and sentenced.
Abusive and obscene language	10	4
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	176	127
Carrying unlawful weapons	189	115
Deserting employment, etc.	4	3
Drunk and disorderly	4,719	3,028
Deserting the militia	9	4
Selling liquor without a license and selling or giving it to Indians	935	727
Threatening and seditious language	38	14
Vagrancy	1,696	1,000
Miscellaneous	29	22
Total	7,795	5,104
Contempt of court, lunatics, etc.	377	45
Other offences, not classified in foregoing	1,759	1,236
Grand total	16,800	9,790

The following tables show the period of sentence passed on the convicted prisoners and the sex, social conditions, habits, etc., of the total number of prisoners committed:

Periods of Sentence.

	1920	1921
For periods under thirty days	2,643	2,622
the last term	1,623	1,542
For sixty days, or two months	293	793
Over two months to three months	1,374	1,195
Over three months to four months	310	677
Over four months to five months	83	517
Over five months to six months	558	675
Over six months to nine months	106	336
Over nine months up to one year, inclusive	193	257
Over one year and up to two years	318	371
Over two years and up to three years in the Penitentiary	142	231
Over three years in the Penitentiary	136	220
For periods of any length in the Industrial Schools	114	331
Sentenced to death and executed	7	5
Sentenced to death and commuted to imprisonment		1
Sentenced to imprisonment with corporal punishment	4	17
	7,904	9,790

Sex.

	1920	1921
Male	13,865	15,619
Female	891	1,181
	14,756	16,800

Social Conditions.

Married	4,975	6,132
Unmarried	9,781	10,668
	14,756	16,800

Habits.

Temperate	6,598	7,601
Intemperate	8,158	9,199
	14,756	16,800

Educational Status.

Could read and write	12,783	14,690
Could neither read nor write	1,973	2,110
	14,756	16,800

Nationality.

Canadian	9,462
English	1,426
Irish	845
Scotch	732
United States	1,272
Other countries	3,063
	16,800

Religious Denomination.

Roman Catholic	7,402
English Church	2,455
Presbyterian	2,075
Methodist	2,273
Other denominations	2,595
	16,800

The number of prisoners confined in the various custodial institutions of the Province at the close of the past official year, and the year preceding, is exhibited in the following summary:

	1920	1921
In the Common Gaols	638	613
In the Reformatory for Females and Refuge for Girls, Toronto	58	124
In the Dominion Penitentiary, Kingston	620	830
In the Industrial Farm, Burwash	473	335
In the Industrial Farm, Fort William	56	37
In the Toronto Municipal Farm, Langstaff	198	274
In the Ontario Reformatory Clay Plant, Mimico	56	80
In the Ontario Reformatory, Guelph		438
	2,099	2,731

Statistical Tables.

Following this portion of the report will be found the tables named in the list given hereunder:

Table No. 2, showing the total number of prisoners in the several gaols on the 30th September, 1921, and the nature of their imprisonment; also showing number of cells in each gaol.

Table No. 3, showing the number of prisoners over and under 16 years of age, the number of recommittals, the number of persons acquitted on being brought to trial, and the number of persons committed under civil processes.

Table No. 4, showing the offences for which prisoners were sentenced.

Table No. 5, showing the number of prisoners, male and female, sentenced under each offence during the year.

Table No. 6, showing the social status and habits of the prisoners committed during the year.

Table No. 7, showing the number of prisoners upon whom sentence was passed, the nature of the sentences, and the operation of the County Judge's Criminal Courts.

Table No. 8, showing how the prisoners committed during the year were maintained, the cost thereof, and the salaries of the officials.

Table No. 9, showing the number of escapes and deaths, the revenue derived from prison labour, the cost of diet, accommodation of the gaols, and the highest and lowest number of prisoners in custody in each gaol during the year.

Table No. 10, showing the daily cost per prisoner in each of the gaols of the Province, for the year ending 30th September, 1921.

Table No. 11, showing the number of prisoners, male and female, sentenced during the year ending 30th September, 1921, and a comparison of the same with the previous year.

Gaol Expenditures.

TABLE No.1

Showing the cost of maintaining the Common Gaols during the past forty-three years, under the heading of rations, clothing, fuel, salaries and wages, and repairs.

Year.	Total number of prisoners in custody each year.	Cost of rations, clothing, fuel, etc., each year.	Cost of salaries and wages of gaol officials each year.	Cost of repairs.	Total gaol expenditure.
		$ c.	$ c.	$ c.	$ c.
1879	11,229	58,856 24	63,914 40	5,583 44	122,355 08
1880	11 300	49,037 14	64,084 34	3 504 96	116,626 44
1881	9,229	45,001 05	63,502 00	3,410 12	111,915 15
1882	9,620	44,768 92	63,794 30	4,665 52	113,228 75
1883	9,880	44,783 50	64,935 96	4,706 20	114,425 66
1884	12,081	61,909 89	68,446 88	7,125 50	127,482 27
1885	11,426	54,321 35	70,344 96	5,081 55	129,747 86
1886	10,645	53,300 43	71,690 76	8,753 07	133 744 26
1887	11,017	48,650 27	71,291 58	6,146 71	126,088 56
1888	12,454	53,961 25	73,633 11	6,509 13	134,143 49
1889	12,531	55,002 89	77 677 84	3,313 20	1 5,983 93
1890	11,810	51,446 99	79,394 49	9,171 01	140,012 49
1891	10,423	58,110 73	79,741 59	12,183 02	150,035 34
1892	9,011	51,505 57	75,564 83	4,6 5 65	135,706 05
1893	8,619	49 76 2 40	79,639 81	8,083 50	137,485 71
1894	9,450	45,115 58	79,790 80	6,728 04	131,634 42
1985	9,380	50,591 40	79,677 17	6,304 58	136,573 15
1986	9,058	49,107 73	80,940 04	6,778 50	135,826 27
1897	8,884	51,066 56	80,863 60	10,248 93	143.179 09
1898	8,256	50,412 91	80,915 05	5,982 56	167,310 52
1899	8,203	50,362 88	82,047 98	4,206 66	132,617 50
1900	8,604	50,353 75	82,144 05	4 944 21	137,442 10
1901	8,546	48,977 86	82,305 15	6,065 44	137,348 45
1902	8,280	49,125 35	85,350 04	6,515 40	140,990 79
1903	9,261	57,252 84	86,081 95	7,122 23	150,457 02
1904	10,146	59 916 13	89,164 98	5,413 09	154,494 20
1905	11,035	64,948 78	91 232 56	7,087 09	163,268 43
1906	10,810	59,874 67	91,663 85	6,635 49	158,174 01
1907	11,804	61 995 01	95,321 24	7,536 14	164,852 39
1908	13,083	68,468 72	98,651 71	8,708 79	175,829 20
1909	13,535	74,557 65	103,141 14	6,877 58	184,576 37
1910	13,687	66,042 87	102,649 54	10,574 71	181,851 05
1911	15,275	70,077 87	106,690 02	7,759 74	187,626 11
1912	16,985	83,708 63	114,462 75	5,765 38	203,936 76
1913	19,250	77,828 15	116,704 08	8,542 59	203,074 82
1914	22,777	87,825 99	124,516 23	9,128 5	221 470 73
1915	20,337	87,403 52	120,742 08	6,840 72	214,986 32
1916	16,100	69,918 14	119,727 46	5,646 14	195 291 74
1917	12,445	71,971 09	115,053 82	7,930 19	194,955 19
1918	13,242	91,065 25	118,598 21	7.076 43	216,739 89
1919	13,096	96,249 18	128 455 52	10 927 32	235 582 02
1920	14,756	11,214 68	148,752 18	12 735 19	273,634 17
1921	16,800	134,557 34	170,795 28	12,935 21	318,287 83

A summary is given below showing the days' stay respectively of those prisoners whose maintenance was chargeable to the Province and of those who were a charge on the Municipalities:—

		Days' Stay
6,765	Criminal prisoners remained in gaol	123,256
10,035	Municipal prisoners remained in gaol	113,245
16,800	Prisoners in all remained in gaol	236,501

TABLE No. 2.

Showing the total number of prisoners who were in the several gaols of the Province on the evening of the 30th September, 1921, and the nature of their imprisonment; also number of cells in each gaol.

Name of gaol.	Classification.				Nature of Imprisonment.						Total number of persons who remained in custody 30th September, 1921.	Total number of cells.
	Men.	Women.	Boys under 16 years.	Girls under 16 years.	Waiting trial.	Under sentence for period of 2 months and under.	Under sentence for periods over 2 months.	In default of sureties to keep the peace.	Insane, idiotic or imbecile persons.	Otherwise detained.		
Barrie	6				1	3	2				6	23
Belleville	12	1			3		8			2	13	38
Brantford	7				2	2	3				7	24
Brampton	5				3		2				5	25
Brockville	5				3	1	1				5	33
Bracebridge	2	1			1		2				3	15
Cayuga	1						1				1	14
Cornwall	10	1			1	3	7				11	17
Cobourg	9				4		5				9	24
Chatham	18	1			3	4	12				19	38
Fort Frances	10				3		5		1	1	10	10
Goderich	6	1			1		6				7	12
Guelph	3					2	1				3	18
Gore Bay	2	2			1		3				4	12
Hamilton	35	7			19	11	10			2	42	75
Kingston	12	1				2	11				13	49
Kitchener	5	2				3	4				7	20
Kenora	8				4	2				2	8	14
London	21	3			6		16		2		24	57
Lindsay	4						3		1		4	24
L'Orignal	2									2	2	18
Milton	5				4		1				5	18
Napanee	2				1					1	2	18
North Bay	16	1			3	5	7		2		17	20
Ottawa	36	6			12	11	19				42	93
Owen Sound	8				1		7				8	32
Orangeville	9	2			1		10				11	22
Perth	2						2				2	18
Picton												18
Pembroke	5					2	3				5	24
Peterborough	9				3	1	5				9	18
Port Arthur	14	4			2	2	12		2		18	40
Parry Sound	1	1					2				2	26
Simcoe	1						1				1	18
St. Catharines	11				6	3	2				11	38
Sarnia	11	1			3	4	5				12	13
Stratford	6	1			4		3				7	30
Sandwich	50	5			33	14	8				55	58
St. Thomas	8	2			2	3	4		1		10	16
Sault Ste. Marie	36	5	1		9	3	28		2		42	23
Sudbury	6	2			2	3	3				8	22
Toronto	93	9			39	30	23		3	7	102	270
Walkerton	4				4						4	24
Woodstock	7					7					7	32
Welland	17				1	4	12				17	48
Whitby	11				1	9	1				11	28
Lock-ups:												
Atikokan												3
Byng Inlet												7
Cobalt	2				2						2	6
Mine Centre												3
Totals	553	59	1		188	134	260		14	17	613	1,546

TABLE

Showing the number of persons committed, the number over and under sixteen years number of unsound mind, number acquitted on trial, number discharged without trial,

Name of gaol.	Total number committed during the year.			Number under 16 years of age.			Number over 16 years of age.			For the first time.	For the second time.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.		
Barrie	130		130	5		5	125		125	95	31
Belleville	402	37	439	5	2	7	397	35	432	359	48
Brantford	227	12	239	1		1	226	12	238	176	30
Brampton	58		58	2		2	56		56	50	6
Brockville	122	1	123	4		4	118	1	119	92	19
Bracebridge	33	2	35				33	2	35	25	4
Cayuga	40	2	42	1		1	39	2	41	37	3
Cornwall	126	6	132				126	6	132	83	15
Cobourg	68	6	74		1	1	68	5	73	50	15
Chatham	269	12	281	8		8	261	12	273	221	40
Fort Frances	120	9	129	4	2	6	116	7	123	116	8
Goderich	43	2	45				43	2	45	38	3
Guelph	56	5	61				56	5	61	35	16
Gore Bay	18	6	24				18	6	24	19	1
Hamilton	879	103	982	1	1	2	878	102	980	635	114
Kingston	99	9	108				99	9	108	78	15
Kitchener	126	15	141	1		1	125	15	140	91	40
Kenora	57	1	58	2	1	3	55		55	55	1
London	616	70	686	25	1	26	591	69	660	396	150
Lindsay	28	3	31	1		1	27	3	30	28	3
L'Orignal	21	3	24	1		1	20	3	23	19	2
Milton	100		100	2		2	98		98	96	1
Napanee	35	2	37				35	2	37	24	8
North Bay	327	19	346				327	19	346	302	33
Ottawa	668	89	757	2		2	666	89	755	703	42
Owen Sound	68	1	69	1		1	67	1	68	34	16
Orangeville	14	6	20				14	6	20	19	1
Perth	54	3	57	2	1	3	52	2	54	53	2
Picton	27	3	30	1		1	26	3	29	27	3
Pembroke	38	1	39	1		1	37	1	38	38	1
Peterborough	172	21	193	1		1	171	21	192	106	39
Port Arthur	509	11	520				509	11	520	504	11
Parry Sound	154	12	166		2	2	154	10	164	143	17
Simcoe	43	5	48				43	5	48	35	11
St. Catharines	249	7	256	3		3	246	7	253	215	21
Sarnia	146	8	154	2		2	144	8	152	107	26
Stratford	100	7	107				100	7	107	88	16
Sandwich	770	57	827				770	57	827	762	34
St. Thomas	130	13	143	2		2	128	13	141	92	32
Sault Ste. Marie	396	43	439	4		4	392	43	435	390	26
Sudbury	1,329	38	1,367	1	2	3	1,328	36	1,364	1,020	105
Toronto	5,936	503	6,439	4		4	5,932	503	6,435	3,039	3,251
Walkerton	41	5	46	3		3	38	5	43	39	2
Woodstock	155	7	162	2		2	153	7	160	123	17
Welland	391	11	402				391	11	402	355	34
Whitby	153	5	158	1		1	152	5	157	119	23
Lock-ups:											
Atikokan	3		3				3		3	3	
Byng Inlet	4		4				4		4	4	
Cobalt	67		67				67		67	67	
Mine Centre	2		2				2		2	2	
Totals	15,619	1,181	16,800	93	13	106	16,526	1,168	16,694	11,201	3,436

No. 3.

of age, the number of re-committals, the number for want of sureties to keep the peace, number waiting trial, number sentenced, and number committed under civil process.

For the third time.	For more than the third time.	For want of sureties to keep the peace	Witnesses.	Lunatics and idiots.	Fraudulent debtors.	Under civil process.	Acquitted on trial and discharged.	Discharged without trial.	Discharged under suspended sentence.	Died before trial.	Waiting trial.	Sentenced for any period.
3	1		3			5	7	5	3		1	106
19	13			2			276		5		3	153
11	28			3			136		1		7	92
1	1						13		17		5	23
9	3	1		2		5	6	4	7		3	95
4	2			2			2	3	3		1	24
1	1			1			12	2	3			24
8	26	3		1	3		10		13		2	100
1	8			1			9	1	13	1	4	45
14	6			2	2		119		12		3	143
1	4		2	2			31		4	2	3	85
4				3			10		3		1	28
6	4							9	6			46
1	3			2			3				1	18
56	177		2	6			17	273	11		17	656
6	9						32	1	3			72
6	4			1			1	45	13			81
1	1			1			33		2		4	18
40	100		4	15			316				6	345
		1		9	1		11					9
1	2						1		4			19
2	1		1			43	1		10		4	41
3	2						8	5	4		2	18
6	5			23			18				3	302
7	5						350				12	395
6	13						3	5			1	60
				4			3		1		1	11
1	1			2			2		10			43
				1				27	2			
							6		1			32
19	29			8			21	102	5		3	54
5			1	19			55	13	3		4	425
5	1			7			65		6			88
1	1		1	3	1	12	4		6			21
10	10						63		16		6	171
3	18					1	3	51	9		2	88
3							1	38	8		4	56
16	15				1		422		17		32	355
13	6			2			60	9	12		2	58
9	14			12	9		61	3	15		9	330
98	144			1			86		7		1	1,272
582	467		23	95	3		2,569	9	535	2	61	3,142
2	3			3			2	5	5			31
11	11								13			149
10	3						79	4			1	318
10	6			3			55	1	2		1	96
											1	2
				1				3				
			1			8	4	4				50
								2				
1,015	1,148	5	38	237	20	74	4,986	624	810	5	211	9,790

TABLE

Showing offences for which prisoners were sentenced

Name of gaol.	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.
Barrie				4					1		
Belleville				1	2		1		1	1	
Brantford				5							2
Brampton				2							3
Brockville				1							
Bracebridge											
Cayuga								1			2
Cornwall		1		2							5
Cobourg		1		2							
Chatham				1	6				2		
Fort Frances						1					
Goderich	1						1				
Guelph					3					2	
Gore Bay				1							
Hamilton				22				1		1	33
Kingston			1	1							
Kitchener				3	4		1				2
Kenora			1	4							
London				3				1		9	
Lindsay				1				1			
L'Orignal				2					4	1	
Milton				2					6		4
Napanee			1	1							2
North Bay			1	8							8
Ottawa				10				1	3		
Owen Sound			2	5	2						5
Orangeville											
Perth				1	1						12
Picton											
Pembroke				1				1			
Peterborough				1	1						
Port Arthur				12	1	2					7
Parry Sound		1		7							1
Simcoe											
St. Catharines				6	3		1	1			14
Sarnia				1							
Stratford						1					2
Sandwich			1	6	13	1			3	16	2
St. Thomas					6			1			
Sault Ste. Marie				5							
Sudbury				5		1					
Toronto	3	1		45	23	2	1	18		4	135
Walkerton											
Woodstock			1	3				3			8
Welland			2	6	8						2
Whitby			1		8						
Lock-ups:											
Atikokan				1	1						
Byng Inlet											
Cobalt				8							
Mine Centre											
Totals	4	4	11	189	82	8	5	29	20	34	249

No. 4.

during the year ending 30th September, 1921.

Contempt of Court.	Carring unlawful weapons.	Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting wounding and attempting same.	Deserting employment.	Destroying and injuring property.	Drunk and disorderly.	Deserting the Militia.	Escaping from and obstructing constables.	Escaping from prison.	Forgery.	Fraud or obtaining money under false pretences.
						3	13		1	1	4	4
2							3		2		1	
	3		1				25				1	2
	1						1					
							11					26
							1					
							4					
4							5		2	1	4	1
							4				2	
3				1			25		3	5	2	
	2											
			1								1	
1							2		1	3		2
						2	5			1		
	8					9	191		4		17	5
							34					1
2						1	5					
	1						134			2	1	9
							3					
	2						2					
							2					2
	3										1	
	1	1		2		1	35	1	1		10	6
4	1			2			140				3	12
							2			1		2
	1						1				1	2
1	1						2				1	1
	1						4				4	4
	4			2	1		140		1	5	1	6
	1						18					2
							3					1
1	2						55				5	
2	2						32				1	
2							6				1	1
1	10						96		2	2	3	4
							18				1	
12	2		1				95		2		7	10
	5	1		1			771		2	2	1	3
	57	5	1	7	2	6	999	3	8	20	18	120
1						1						
							28			1	2	
9	7		2			1	89				1	3
						1	7					1
							17					
45	115	7	6	15	3	25	3,028	4	29	44	94	230

TABLE

Showing offences for which prisoners were sentenced

Name of gaol.	Gambling.	Giving liquor to Indians.	Horse, cattle and sheep stealing.	Housebreaking and robbery.	Incendiarism.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping houses of ill-fame.	Larceny.	Manslaughter.	Misdemeanour.	Murder.	Perjury.
Barrie	1		2			2			32		1		
Belleville				19		1	1		26		1		
Brantford				6		1		2	15				
Brampton						2			7				
Brockville				1		1			17				
Bracebridge				13									
Cayuga			3	1					3				
Cornwall			2	2					26				
Cobourg				4		1			5				
Chatham	4			19		2			24				
Fort Frances				15						2			
Goderich								1	6				
Guelph			1			2			16		1		
Gore Bay		2							1				
Hamilton	1			13		1	3	4	96				
Kingston						1		1	13				
Kitchener				6		2	1		8	1			1
Kenora		2							3				
London	2			2		2			88				
Lindsay	1			2									
L'Orignal													
Milton									15				2
Napanee									6				
North Bay		1		13				3	72				
Ottawa				24		3	2	1	84				
Owen Sound									19				
Orangeville													
Perth				2		1							
Picton													
Pembroke		1							12				
Peterborough				1		1			9				
Port Arthur						1			40	2		1	1
Parry Sound		5				3	5	1	7				
Simcoe									13				
St. Catharines						1			19				
Sarnia						5	4	3	15				
Stratford				2					8				1
Sandwich	3			15		1	2	2	44				10
St. Thomas									11				
Sault Ste. Marie				5		9	1	7	40				
Sudbury	16			15		3	1						1
Toronto	22		2	204		23	66	18	375	9		2	10
Walkerton									16				
Woodstock				2						1		1	
Welland				17		2	1		25				
Whitby				19									
Lock-ups:													
Atikokan													
Byng Inlet													
Cobalt							1	1	10				
Mine Centre													
Totals	50	11	10	422		71	88	44	1,236	15	3	4	26

No. 4.—Continued.

during the year ending 30th September, 1921.

Prostitution.	Rape and assault with intent.	Refusing bail.	Receiving stolen goods.	Seduction.	Selling liquor without a license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful shooting.	Vagrancy.	Other offences not enumerated.	Totals.
				1	6				12		5	13	106
4				1	51				15	1	16	3	153
			1	1	19						6	2	92
								1	2		2	2	23
					18				14		1	5	95
	1								6		3		24
											7	3	24
			1	2	21	1		1	4	1	1	13	100
					13				1		11	1	45
					32				2		6	6	143
	1		1		3						3	57	85
					4						13		28
1	1		1		6						1	2	46
											2	4	18
	1		7	1		1		6	42		36	153	656
					10						6	4	72
			2								18	24	81
					6						2		18
			2		60				17		10	2	345
					1								9
					3						1	4	19
											7	1	41
									2		2		18
4					21	2		2	4	6	32	67	302
					29				9		243	24	395
					16						2	4	60
											11		11
					8				3		10		43
									1		5	5	32
	1		1						2		74	12	54
			5		66	2		1	21	3	12	26	425
					26						6	5	88
					2	2							21
					15	1					5	42	171
				1	16						2	4	88
											6	26	56
	1								2		14	101	355
				2	12						2	5	58
5			2							2	33	92	330
			1		34		1		50		56	302	1,272
3	4		71	5	174	2	1	3	109		514	47	3,142
			1								8	4	31
1	2			2	1						40	53	149
1			3						14		15	110	318
					30				10		11	8	96
													2
					13								50
19	12		99	16	716	11	2	14	332	13	1,060	1,236	9,790

TABLE No. 5.

Showing the total number of prisoners, male and female, sentenced under each offence, during the year ending 30th September, 1921.

Offences.	Male.	Female.	Total.
Abortion	3	1	4
Abusive and obscene language	3	1	4
Arson	11	.....	11
Assault	184	5	189
Assault, felonious	81	1	82
Attempted suicide	7	1	8
Abduction	5	.....	5
Bigamy	25	4	29
Breaches of the peace	20	.....	20
Breaches of by-laws	31	3	34
Burgary	249	.....	249
Contempt of court	45	.....	45
Carrying unlawful weapons	115	.....	115
Counterfeiting and passing counterfeit money	7	.....	7
Cruelty to animals	6	.....	6
Cutting, wounding and attempting same	15	.....	15
Deserting employment	3	.....	3
Destroying and injuring property	25	.....	25
Drunk and disorderly	2,967	61	3,028
Deserting Militia	4	.....	4
Escaping from or obstructing constables	29	.....	29
Escaping from prison	44	.....	44
Forgery	90	4	94
Fraud or obtaining money or goods under false pretences	208	22	230
Gambling	50	.....	50
Giving liquor to Indians	9	2	11
Horse, cattle and sheep stealing	10	.....	10
Housebreaking and robbery	421	1	422
Incendiarism	.....	.....	.....
Indecent assault and exposure	71	.....	71
Inmates and frequenters of houses of ill-fame	37	51	88
Keepers of houses of ill-fame	25	19	44
Larceny	1,140	96	1,236
Manslaughter	14	1	15
Misdemeanour	1	2	3
Murder	4	.....	4
Perjury	24	2	26
Prostitution	.....	19	19
Rape and assault with intent	12	.....	12
Refusing bail	.....	.....	.....
Receiving stolen property	89	10	99
Seduction	16	.....	16
Selling liquor without license	603	113	716
Shooting with intent	8	3	11
Stabbing	2	.....	2
Threatening and seditious language	12	2	14
Trespasss	331	1	332
Unlawful shooting	12	1	13
Vagrancy	928	132	1,060
Other offences not enumerated	1,169	67	1,236
Totals	9,165	625	9,790

TABLE No. 6.

Showing the social status and habits of the prisoners committed during the year ending 30th September, 1921.

Name of gaol.	Married.	Unmarried.	Temperate	Intemperate.	Total committed to gaol.	Neither read nor write.
Barrie	37	93	91	39	130	20
Belleville	124	315	410	29	439	35
Brantford	125	114	109	130	239	38
Brampton	24	34	21	37	58	1
Brockville	35	88	57	66	123	8
Bracebridge	6	29	31	4	35	1
Cayuga	11	31	34	8	42	2
Cornwall	61	71	77	55	132	42
Cobourg	29	45	45	29	74	6
Chatham	90	191	142	139	281	36
Fort Frances	41	88	64	65	129	25
Goderich	13	32	38	7	45	3
Guelph	34	27	49	12	61	5
Gore Bay	16	8	11	13	24	12
Hamilton	397	585	396	586	982	152
Kingston	38	70	51	57	108	11
Kitchener	41	100	101	40	141	8
Kenora	16	42	58	.....	58	8
London	207	479	384	302	686	6
Lindsay	13	18	10	21	31	9
L'Orignal	12	12	19	5	24	3
Milton	16	84	40	60	100	8
Napanee	13	24	32	5	37	6
North Bay	130	216	249	97	346	74
Ottawa	292	465	336	421	757	121
Owen Sound	20	49	46	23	69	11
Orangeville	8	12	18	2	20	1
Perth	13	44	24	33	57	9
Picton	13	17	20	10	30	1
Pembroke	13	26	23	16	39	5
Peterborough	67	126	149	44	193	4
Port Arthur	130	390	170	350	520	.....
Parry Sound	61	105	95	71	166	60
Simcoe	24	24	21	27	48	8
St. Catharines	112	144	131	125	256	55
Sarnia	54	100	42	112	154	29
Stratford	44	63	54	53	107	11
Sandwich	326	501	378	449	827	57
St. Thomas	72	71	126	17	143	10
Sault Ste. Marie	177	262	143	296	439	60
Sudbury	277	1,090	100	1,267	1,367	243
Toronto	2,551	3,888	2,821	3,618	6,439	760
Walkerton	16	30	40	6	46	1
Woodstock	49	113	104	58	162	4
Welland	187	215	165	237	402	94
Whitby	68	90	49	109	158	45
Lock-ups:						
Atikokan	1	2	.....	3	3	1
Byng Inlet	.....	4	1	3	4	1
Cobalt	27	40	26	41	67	.....
Mine Centre	1	1	.....	2	2	.....
Totals	6,132	10,668	7,601	9,199	16,800	2,110

TABLE

Showing the number of prisoners upon whom sentences were passed, the nature of such
Criminal Court during the year

Name of gaol.	Total number of prisoners sentenced during the year.			Where sentenced to.					
	Male.	Female	Total.	To gaol and afterwards transferred to Reformatory.	To Reformatory for Ontario direct.	To gaol and afterwards transferred to female Reformatory.	To female Reformatory direct.	To Penitentiary	Sentenced elsewhere.
Barrie	106		106		40				10
Belleville	142	11	153	2	21		5	5	
Brantford	87	5	92	5	18		1	2	1
Brampton	23		23		7			5	1
Brockville	95		95		20			2	2
Bracebridge	22	2	24	1	3			6	
Cayuga	23	1	24		3	1		5	
Cornwall	96	4	100	5	18			10	
Cobourg	42	3	45	4				1	3
Chatham	140	3	143	7	18			1	4
Fort Frances	79	6	85	1	3			3	20
Goderich	26	2	28	2	5		1		
Guelph	44	2	46	9	8			6	
Gore Bay	13	5	18	3	2	1			
Hamilton	601	55	656	70	90	1	29	53	
Kingston	68	4	72	1	5				
Kitchener	74	7	81	4	14	2	4	10	
Kenora	18		18					1	
London	314	31	345		47		18	17	12
Lindsay	9		9	4					
L'Orignal	16	3	19	4			1	4	
Milton	41		41		7			4	3
Napanee	17	1	18		6			3	1
North Bay	286	16	302	163	2	1	6	21	4
Ottawa	355	40	395	26	45	1	17	26	
Owen Sound	59	1	60	3	9			3	
Orangeville	8	3	11						2
Perth	41	2	43		7		2	5	
Picton									
Pembroke	32		32	1			5		
Peterborough	49	5	54		16	1	4	2	
Port Arthur	418	7	425	354	4	2		19	5
Parry Sound	86	2	88		51		2	3	
Simcoe	18	3	21	1	8			2	4
St. Catharines	164	7	171	47		2		8	4
Sarnia	84	4	88		17		2	4	
Stratford	53	3	56		12		3	4	
Sandwich	333	22	355	3	68		15	40	19
St. Thomas	50	8	58	6	5		2	1	5
Sault Ste. Marie	287	43	330	27	33	3	10	13	
Sudbury	1,245	27	1,272	558	62	2	1	21	
Toronto	2,874	268	3,142	1,881	546	211	32	102	
Walkerton	28	3	31		3	1		1	
Woodstock	142	7	149		14		1	10	
Welland	316	2	318	98		1		12	
Whitby	94	2	96		29	2		5	
Lock-ups:									
Atikokan	2		2						
Byng Inlet									
Cobalt	50		50						
Mine Centre									
Totals	9,170	620	9,790	3,290	1,266	232	161	440	100

No. 7.

sentences, and the disposal of those who elected to be tried at the County Judge's ending September 30th, 1921.

Died while undergoing sentence.	To gaol and there detained until expiration of sentence or payment of fines.	Capital and corporal sentences.			County Judge's criminal court.		
		Number of prisoners sentenced to death and executed.	Number of prisoners sentenced to death and commuted to imprisonment	Number of prisoners sentenced to corporal punishment with imprisonment.	Acquitted on trial and discharged from custody.	Found guilty and sentenced.	Total number who elected to be tried.
.....	56	.....	.....	.....	3	18	21
.....	120	.....	.....	3	12	23	35
.....	65	1.	.....	.....	18	6	24
.....	10	.....	.....	1	4	16	20
.....	71	.....	.....	.....	8	21	29
.....	14	.....	.....	.....	3	7	10
.....	15	.....	.....	.....	6	11	17
.....	67	.....	.....	.....	1	7	8
.....	37	.....	.....	.....	5	5	10
1	112	.....	.....	.....	10	21	31
.....	58	.....	.....	.....	.....	1	1
.....	20	.....	.....	.....	3	13	16
.....	23	.....	.....	.....	.....	7	7
.....	12	.....	.....	.....	.....	1	1
.....	413	.....	.....	.....	12	62	74
.....	66	.....	.....	.....	2	4	6
.....	47	.....	.....	1	1	10	11
.....	17	.....	.....	.....	2	2	4
.....	251	.....	.....	.....	2	17	19
.....	5	.....	.....	.....	.....	.....	.....
.....	10	.....	.....	.....	1	7	8
.....	27	.....	.....	.....	1	12	13
.....	8	.....	.....	.....	.....	7	7
2	103	.....	1	.....	.....	5	5
.....	280	.....	.....	.....	17	5	22
.....	45	.....	.....	.....	.....	10	10
.....	9	.....	.....	.....	.....	1	1
.....	29	.....	.....	.....	2	11	13
.....	.....	.....	.....	.....	.....	.....	.....
.....	26	.....	.....	.....	4	2	6
.....	30	.....	.....	.....	3	9	12
1	40	.....	.....	.....	.....	.....	.....
.....	32	.....	.....	.....	10	6	16
.....	6	.....	.....	.....	1	2	3
.....	110	.....	.....	.....	5	14	19
.....	65	.....	.....	3	2	1	3
.....	37	.....	.....	.....	.....	.....	.....
.....	210	.....	.....	.....	19	24	43
.....	39	.....	.....	.....	9	9	18
.....	244	.....	.....	1	2	6	8
.....	628	1	.....	.....	12	17	29
.....	370	2	.....	8	132	447	579
.....	26	.....	.....	.....	2	15	17
.....	124	1	.....	.....	.....	.....	.....
1	206	.....	.....	.....	5	15	20
.....	60	.....	.....	.....	2	4	6
.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	50	.....	.....	.....	.....	2	2
.....	.....	.....	.....	.....	.....	.....	.....
6	4,295	5	1	17	321	883	1,204

TABLE

Showing the number of prisoners, how maintained, cost of maintenance, and

Name of gaol.	Name of gaoler.	How Maintained.				
		Total number of prisoners committed during the year.	Number of prisoners whose maintenance was defrayed by the Province.	Number of prisoners whose maintenance was defrayed by the municipalities.	Number of days' custody of Government prisoners.	Number of days' custody of municipal prisoners.
Barrie	H. E. Stoddart	130	47	83	1,418	2,117
Belleville	T. Ketcheson	439	370	69	5,785	589
Brantford	J. Cook	239	92	147	1,742	2,361
Brampton	J. McClure	58	44	14	973	168
Brockville	W. R. Scace	123	69	54	1,313	1,213
Bracebridge	D. McDonald	35	35		1,039	
Cayuga	T. Walsh	42	23	19	650	388
Cornwall	T. W. Ault	132	86	46	2,519	500
Cobourg	G. L. McLaughlin	74	26	48	1,072	1,403
Chatham	Jno. Davidson	281	117	164	3,169	3,152
Fort Frances	R. Bolton	129	129		3,338	
Goderich	J. D. Griffin	45	16	29	927	918
Guelph	J. McNab	61	36	25	871	461
Gore Bay	S. Cronkhite	24	24		1,859	
Hamilton	J. Ogilvie	982	189	793	7,434	9,158
Kingston	J. T. Hawkey	108	33	75	1,396	2,280
Kitchener	J. Cook	141	47	94	1,029	2,353
Kenora	O. Groves	58	58		1,710	
London	J. Carter	686	133	553	3,006	5,823
Lindsay	G. A. Balfour	31	15	16	533	564
L'Orignal	F. Millette	24	15	9	541	827
Milton	A. McGibbon	100	27	73	462	1,336
Napanee	W. E. Loyst	37	25	12	1,143	294
North Bay	W. J. Bailey	346	326	20	10,182	119
Ottawa	A. G. Dawson	757	346	411	6,197	5,364
Owen Sound	W. A. Grier	69	41	28	1,114	1,192
Orangeville	G. Leighton	20	5	15	27	3,816
Perth	J. Oates	57	33	24	904	1,531
Picton	A. Huyck	30	16	14	276	256
Pembroke	W. Brown	39	23	16	610	406
Peterborough	H. Nesbitt	193	34	159	1,037	3,163
Port Arthur	T. Penfold	520	520		3,597	4,946
Parry Sound	J. A. Johnston	166	166		1,731	
Simcoe	O. Robertson	48	38	10	1,056	42
St. Catharines	G. Bush	256	98	158	1,951	2,155
Sarnia	J. N. Dodd	154	68	86	1,507	2,151
Stratford	H. Nichol	107	40	67	950	1,572
Sandwich	W. A. Wanless	827	363	464	9,339	6,863
St. Thomas	W. T. Luton	143	85	58	2,342	480
Sault Ste. Marie	R. M. Hearst	439	439		13,866	
Sudbury	J. O'Neil	1,367	302	1,065	3,645	5,651
Toronto	J. H. Basher	6,439	1,855	4,584	14,192	26,725
Walkerton	D. McKechnie	46	24	22	888	668
Woodstock	W. McGhee	162	52	110	791	2,643
Welland	J. Kottmeir	402	120	282	2,398	4,480
Whitby	J. Stiner	158	39	119	727	3,117
Lock-ups:						
Atikokan	J.L.McGregor	3	3			
Byng Inlet	B. Moore	4	4			
Cobalt		67	67			
Mine Centre	J.R. Gilbert	2	2			
		16,800	6,765	10,035	123,256	113,245

No. 8.

salaries of various gaol officials for the year ended 30th September, 1921

Expenditure.					Salaries.			
Cost of fuel, food and clothing	Cost of official salaries.	Cost of repairs.	Total gaol expenditure	Average cost per prisoner for entire gaol expenditure.	Gaolers.	Turnkey.	Matrons.	Gaol surgeons.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,498.46	3,087.00	431.80	6,017.26	46.29	1,100 00	1,212.00	500.00	275.00
3,463.00	2,050.00	100.00	5,613.00	12.79	700.00	650.00	400.00	300.00
2,152.80	3,484.50	123.51	5,760.81	24.10	1,075.00	1,688.50	375.00	346.00
588.46	1,534.52	116.16	2,239.14	38.60	550.00	634.52	250.00	100.00
2,124.83	2,340.50	33.95	4,499.28	36.58	200.00	1,790.50	200.00	150.00
535.34	1,000.00	36.40	1,571.74	44.90	700.00	.....	150.00	150.00
939.56	940.00	92.26	1,971.82	46.95	600.00	.....	200.00	140.00
1,472.98	2,669.00	76.38	4,218.36	31.96	1,500.00	719.00	350.00	100.00
3,285.57	2,755.16	234.31	6,275.04	84.80	1,000.00	1,136.66	418.50	200.00
2,121.89	3,307.00	.....	5,428.89	19.32	900.00	1,907.00	300.00	200.00
1,059.11	2,300.00	.....	3,359.11	26.04	900.00	1,100.00	300.00	.....
2,125.73	1,845.00	.....	3,970.73	88.24	800 00	700.00	225.00	120.00
1,452.26	2,050.00	.....	3,502.26	57.41	900.00	750.00	300.00	100.00
1,891.49	1,062.00	7.30	2,960.79	123.37	550.00	312.00	200.00	.....
5,463.85	12,865.54	1,933.41	20,262.80	20.63	1,700.00	10,387.34	778.20	.....
2,877.51	3,837.00	150.00	6,864.51	63.56	1,312.50	1,896.50	428.00	200.00
2,665.45	2,475.00	61.00	5,201.45	36.89	1,100.00	925.00	315.00	135.00
1,446.25	2,180.00	.....	3,626.25	62.52	787.50	992.50	200.00	200.00
5,146.03	5,690.00	40.13	10.876.16	15.85	1,150.00	3,690.00	500.00	350.00
933.41	2,100.00	758.16	3,791.57	122.31	900.00	900.00	200.00	100.00
535.65	1,830.00	7.75	2,373.40	98.89	800.00	730.00	200.00	100.00
839.76	1,625.00	.....	2,464.76	24.65	800.00	575.00	200.00	50.00
732.61	1,275.00	10.00	2.017,61	54.53	1,000.00	.....	200.00	75.00
5,486.95	5,521.00	327.68	11,335.63	32.76	900.00	4,271.00	200.00	150.00
10,854.01	8,306.44	859.64	20,020.09	26 45	2,000.00	5,291.44	650.00	365.00
2,318.00	2,100.00	20.00	4,438.00	64.32	800.00	750.00	300.00	250.00
2,574.02	1,825.00	177.72	4,576.74	228.84	700.00	700.00	300.00	125.00
1,310.48	1,991.25	128.00	3,429.73	60.14	1,000.00	800.00	91.25	100.00
98.00	975.00	.....	1,073.00	35.77	700.00	.....	200.00	75.00
1,427.05	2,255.00	.....	3,682.05	94.41	1,200.00	730.00	225.00	100.00
1,995.23	1,900.00	.....	3,895.23	20.18	900.00	700.00	150.00	150.00
5,866.46	4,990.00	213.00	11,069.46	21.29	900.00	3,490.00	300.00	300.00
1,039.59	1,871.25	25.00	2,935.84	17.69	750.00	821.25	150.00	150.00
663.37	2,045.00	160.27	2,868.64	59.76	840.00	880.00	250.00	75.00
1,200.00	4,145.00	125.00	5,470.00	21.37	1,400.00	2,295.00	300.00	150.00
836.70	2,545.00	422.10	3,803.80	24.70	975.00	970.00	400.00	200.00
1,687.98	2,583.00	879.21	5,150,19	48.13	1,000.00	963.00	470.00	150.00
7,638.73	5,862.28	.....	13,501.01	16,33	1,200.00	3,662.28	500.00	500.00
801.58	3,504.27	365.52	4,671.37	32.67	1,000.00	2,054.27	300.00	150.00
7,371.88	3,140.00	652.86	11,164.74	25.43	840.00	1,800.00	200.00	300.00
2,867.94	6,206.55	.....	9,074.49	6.64	1,277.50	4,529.05	250.00	150.00
23,086.59	32,019.58	1,959.69	57,065.86	8.86	3,087.50	23,388.48	4,043.60	1,500.00
1,713.55	1,750.00	275.00	3,738.55	81.27	800.00	600.00	250.00	100.00
2,002.13	3,076.33	1,818.61	6,897.07	42.57	900.00	1,776.33	300.00	100.00
3,139.94	3,263.50	258.73	6,662.17	16.57	1,056.00	1,710.50	297.00	200.00
2,225.16	3,867.61	54.66	6,147.43	38.91	800.00	2,717.61	200.00	150.00
.....	150.00	.....	150.00	.....	150.00	.....	.....	.....
.....	300.00	.....	300.00	.....	300.00	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	300.00	.....	300.00	.....	300.00	.....	.....	.....
134,557.34	170,795.28	12,935.21	318,287.83	.....	46,801.00	97,596.78	17,516.55	8,881.00

TABLE NO. 9.

Showing the number of escapes and deaths, the revenue derived from prison labour, the cost of diet, the accommodations of the various gaols and the highest and lowest number of prisoners in custody during the year ending September 30th, 1921.

Name of gaol.	Prisoners who escaped and evaded recapture.	Prisoners who escaped and were re-captured.	Prisoners who died.	Number of cells in each gaol.	Greatest number of prisoners confined in gaol at any time during the year.	Lowest number of prisoners confined in gaol at any time during the year.	Actual cash revenue derived from prison labour.	Cost of daily rations for prisoners.
							$ c.	Cents.
Barrie		1.		23	21	4		20.25
Belleville				38	36	8		18.73
Brantford				24	23	4		12.50
Brampton				25	9	1		19.20
Brockville				33	14	2		19.80
Bracebridge				15	9			18.33
Cayuga				14	7	1		21.00
Cornwall				17	22	2		21.50
Cobourg		1.	1	24	14	2		16,00
Chatham	5		1	38	28	4		20.25
Fort Frances			2.	10	16	3		20.83
Goderich				12	11	1		25.00
Guelph				18	8			18.00
Gore Bay				12	11	1		60.00
Hamilton				75	66	27		16.76
Kingston				49	18	3	3,495.10	22.50
Kitchener				20	24	1		20.25
Kenora				14	10			29.40
London	2	1.		57	40	11		16.60
Lindsay		4.		24	9	1		20.07
L'Orignal				18	11	2		22.00
Milton				18	13	1		19.36
Napanee	1			18	8	1		18.23
North Bay	2		2	20	48	11		23.67
Ottawa				93	78	14	1,470.78	20.50
Owen Sound				32	11	1		25.10
Orangeville				22	15	8		29.00
Perth				18	15	1		18.40
Picton				18	3			13.00
Pembroke				24	6			18.50
Peterborough			1	18	18	5		20.40
Port Arthur	3		1	40	50	9		23.35
Parry Sound				26	14	1		25.23
Simcoe				18	8			17.50
St. Catharines				38	26	3		19.00
Sarnia				13	25	3		21.00
Stratford				30	16	4		19.07
Sandwich	2	1.		58	74	22		22.58
St. Thomas				16	19	5		14.75
Sault Ste. Marie				23	54	26		24.00
Sudbury				22	66	8		23.75
Toronto			2	270	153	54		21.50
Walkerton				24	11	1		14.00
Woodstock		1.		32	16	4		17.80
Welland	1		1	48	38	8		21.20
Whitby				28	21	7		16.75
Lock-ups:								
Atikokan				3				
Byng Inlet				7				
Cobalt				6				
Mine Centre				3				
Totals	16	8	11	1,546	1,113	275	4,965.88	

TABLE No. 10

Showing the daily cost per prisoner in each of the gaols, excluding the District Lock-ups for the year ending September 30, 1921

Name of gaol.	Number of prisoners committed during the year.	Total days' stay of prisoners during the year.	Cost of fuel, food and clothing.	Average cost per day for each prisoner.
			$ c.	Cents.
Barrie	130	3,535	2,498.46	70.68
Belleville	439	6,374	3,463.00	54.33
Brantford	239	4,103	2,152.80	52.47
Brampton	58	1,141	588.46	51.57
Brockville	123	2,526	2,124.83	84.12
Bracebridge	35	1,039	535.34	51.52
Cayuga	42	1,038	939.56	90.52
Cornwall	132	3,019	1,472.98	48.79
Cobourg	74	2,475	3,285.57	132.75
Chatham	281	6,321	2,121.89	33.57
Fort Frances	129	3,338	1,059.11	31.73
Goderich	45	1,845	2,125.73	115.21
Guelph	61	1,332	1,452.26	109.11
Gore Bay	24	1,859	1,891.49	101.74
Hamilton	982	16,592	5,463.85	32.94
Kingston	108	3,676	2,877.51	78.28
Kitchener	141	3,382	2,665.45	78.81
Kenora	58	1,710	1,446.25	84.58
London	686	8,829	5,146.03	58.29
Lindsay	31	1,097	933.41	85.09
L'Orignal	24	1,368	535.65	39.16
Milton	100	1,798	839.76	46.71
Napanee	37	1,437	732.61	50.98
North Bay	346	10,301	5,486.95	53.27
Ottawa	757	11,561	10,854.01	93.89
Owen Sound	69	2,306	2,318.00	100.52
Orangeville	20	3,843	2,574.02	66.98
Perth	57	2,435	1,310.48	53.82
Picton	30	532	98.00	18.42
Pembroke	39	1,016	1,427.05	140.46
Peterborough	193	4,200	1,995.23	47.51
Port Arthur	520	8,543	5,866.46	68.67
Parry Sound	166	1,731	1,039.59	60.05
Simcoe	48	1,098	663.37	60.42
St. Catharines	256	4,106	1,200.00	29.20
Sarnia	154	3,658	836.70	22.87
Stratford	107	2,522	1,687.98	66.93
Sandwich	827	16,202	7,638.73	47.15
St. Thomas	143	2,822	801.58	28.44
Sault Ste Marie	439	13,866	7,371.88	53.19
Sudbury	1,367	9,296	2,867.94	30.85
Toronto	6,439	40,917	23,086.59	56.42
Walkerton	46	1,556	1,713.55	110.13
Woodstock	162	3,434	2,002.13	58.30
Welland	402	6,878	3,139.94	45.65
Whitby	158	3,844	2,225.16	57.89
Totals	16,724	236,501	134,557.34	56.88

Fifty-fourth Annual Report

OF THE

INSPECTOR OF

Prisons and Reformatories

OF THE

PROVINCE OF ONTARIO

BEING FOR TWELVE MONTHS ENDING 31st OCTOBER

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed by CLARKSON W JAMES, Printer to the King's Most Excellent Majesty
1921

Parliament Buildings, Toronto, December 16th, 1921.

To His Honour HENRY COCKSHUTT,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I beg to submit herewith the Fifty-fourth Annual Report upon the Prisons and Reformatories, being for the year ending 30th September, 1921.

I have the honour to be,

Your Honour's most obedient servant,

H. C. NIXON,

Provincial Secretary.

Toronto, December 6th, 1921.

Sir,—I have the honour to submit herewith, to be presented to His Honour the Lieutenant-Governor, the Fifty-fourth Annual Report upon the Prisons and Reformatories of the Province of Ontario, being for the official year ending 30th September, 1921.

I have the honour to be, Sir.

Your obedient servant,

W. W. Dunlop,

Inspector.

The Honourable H. C. Nixon, M.P.P.,

Secretary of the Province of Ontario,

Toronto.

ANNUAL REPORT

THE ONTARIO REFORMATORY, GUELPH, ONT.

February, 16th, 1922.

DEAR SIR:

After being in the hands of the Military authorities for nearly four years this Institution was re-opened on January 25th, 1921, as the Ontario Reformatory.

A few members of the staff of the Ontario Reformatory of former days were available, and formed a nucleus for the new staff. Eighty picked prisoners from the Industrial Farm, Burwash, were transferred here, and on January 28th, 1921, the Institution was again operating.

The prison population gradually rose by ordinary transfers from County and District Gaols—the staff was increased accordingly, and by October 31st, the end of the fiscal year, the population was the highest in the history of the Institution. This increase was due largely to industrial depression and factors arising from the Great War.

From an Institutional standpoint, the period for which I am reporting has been the most satisfactory of any during my eight years as Superintendent of a Reformatory Institution.

The work has run very smoothly, due largely to the spirit of co-operation among the members of the staff. This is especially gratifying in view of the fact that to most of the officials, this kind of work is entirely new, and I wish to take this opportunity of expressing my appreciation for the efforts they have made individually and collectively, in co-operating to make a smooth running organization.

A great amount of work was done during the summer in grading the grounds around the Buildings—in clearing bush land, and in draining and stumping the swamps.

The Abattoir was the first industry to be re-opened and by the end of the year was producing more than at any time in its history. The service given apparently has been satisfactory to the Institutions, and is undoubtedly an economic success.

The Quarry was re-opened in June, and operated throughout the remainder of the year, shipping between five and six cars of crushed rock per day for use on the Provincial Highways.

The Woollen Mill was re-opened in October, and at the time of writing is operating at full capacity.

Permit me to take this opportunity of expressing my gratitude for the assistance received from religious and secular Institutions, particularly the Ministerial Association, Salvation Army, Guelph Musical Organizations, neighboring

Athletic Clubs, and others. These organizations do not realize the great assistance they have given, and I trust that some time we will have a better opportunity of showing them our appreciation.

Much remains to be done in classification of prisoners. A start has been made this year, and I trust that during the coming year we will have in full operation a Research Laboratory, so that there will be available much more information regarding the individual prisoner, than we have at present. Only by having such detailed information can the individual case be dealt with efficiently and effectively. The day must come when we shall have such information regarding all the prisoners of this Province and only then can a proper classification be worked out.

In conclusion I wish to thank you and the other officers of the Department who have so heartily co-operated in all the work of the past year, and who have assisted to such an extent in making the work a success and pleasure.

Very truly yours,

(Sgd.) C. F. NEELANDS,
Superintendent.

W. W. DUNLOP, ESQ.,
Inspector of Prisons and Public Charities,
Parliament Buildings,
TORONTO, ONT.

TORONTO MUNICIPAL FARM, LANGSTAFF, ONT.

ANNUAL REPORT FOR YEAR OCTOBER 1ST, 1920—SEPTEMBER 30TH, 1921.

Langstaff, Ont., February 15th, 1922.

W. W. DUNLOP, ESQ.,
Inspector of Prisons,
Parliament Buildings,
TORONTO, ONT.

SIR:

During the year under review 1,775 inmates have passed through the Institution, the number of successful escapes being seven.

I am submitting reports from Dr. C. P. Johns and Dr. Lillian C. Langstaff who attend the Men's and Women's Farms respectively which show that the health has been on the whole good, with the exception of the Venereal Diseases cases which were all treated successfully.

The discipline of the Institution has remained exceptionally good in spite of the fact that the remission of sentence for good conduct is not applicable to this Institution as it is at similar ones in the Province.

We are still handicapped by not having Historical, Medical and Psychiatric Records on commitment and until this is provided proper classification for work, education and reformative action will be more or less unsatisfactory.

The new water tower providing ample water storage for domestic use and fire protection was constructed very economically by prison labor and is now in

operation, the reinforced concrete due to the cheapness of labor costing under $14.00 per cubic yard.

The system of purchase, receipt and issue of stores in vogue, under the Property Commissioner of Toronto has proved unsatisfactory and should be reorganized.

I also submit reports from the Deputy-Superintendent, School Teacher and Farm Foreman, whose farm reports will show that in spite of unfavourable weather conditions the farm production although smaller than last year is still higher than the average of the district and enough products were grown on the farm to supply not only the demand of the Institution but a surplus for disposal on the market.

I wish to commend to your notice the staff of the farms for their loyal co-operation also the following ladies and gentlemen who have again continued their worthy efforts to improve the welfare of those committed to the Institutions: Brigadier Frazer, Capt. McElhiney and Officers of the Salvation Army, Canon Kuhring of the Church of England, Rev. P. J. Bench of the Catholic Charities, Mr. Mills and Mrs. Land of the Christian Science Church, Mr. F. Graham of the Y.M.C.A., Mr. J. P. Bickle, Mr. R. C. Matthews and many others.

I have the honour to be,

SIR,

Your obedient servant,

W. J. MORRISON, MAJOR,

Superintendent.

TABLE

Showing the number of prisoners in custody at received during the year, the number discharged, tody at 30th September, 1921.

	In custody at 30th Sept., 1920.	Committed during year.	Total number in custody.	Discharged on expiration of sentence.	Discharged by ticket-of-leave.	Discharged by Parole Board.	Discharged by payment of fines
Ontario Reformatory—Guelph		847	847	270	24	57	5
Ontario Reformatory—Clay Plant, Mimico	56	229	285	149	5	8	7
Industrial Farm—Burwash	473	1,139	1,612	911	70	125	23
Industrial Farm—Ft. William	56	309	365	274	8	2	16
Toronto Municipal Farm—Langstaff (males)	172	1,608	1,780	1,293	19		140
Toronto Municipal Farm—Langstaff (females)	26	167	193	128	1		13
Mercer Reformatory	58	173	231	76	3	14	4
Total	841	4,472	5 313	3,101	130	206	208

TABLE No. 2.

Showing Social Conditions.

Married	1,406
Single	3,066
	4,472

TABLE No. 3.

Showing the Educational Status.

Read and write	3,856
Neither read nor write	616
	4,472

TABLE No. 4.

Showing the Habits of Prisoners.

Temperate	2,208
Intemperate	2,264
	4,472

TABLE No. 5.

Showing the Religions of Prisoners.

Anglicans	833
Methodists	494
Presbyterians	680
Roman Catholics	1,959
Other religions	506
	4,472

No. 1.

30th September, 1920, the number
died, etc., and the number in cus-

Discharged by remission of sentence.	Discharge by Order-in-Council.	Discharged by Minister of Justice.	Conditional discharges.	Other reasons.	Escaped.	Returned to gaols.	Transferred to penitentiary.	Transferred to hospitals for insane.	Transferred to provincial institutions.	Released on Writ of Habeas Corpus.	Died while in custody.	Remaining in custody at 30th September, 1921.
7				18	8				19		1	438
21				7	7				1			80
	8				36				98		6	335
2					14	12						37
	44	16		1	10	5			7		4	238
2	11	1									1	36
	3	3						4				124
35	66	20		26	75	17		4	125		12	1,288

TABLE No. 6.

Showing the Length of the Sentences.

One month	1,590
Two months	249
Three months	748
Four months	186
Five months	52
Six months	644
Eight months	24
Nine months	50
Ten months	7
One year	230
Fifteen months	72
Two years	75
Indefinite sentences	545
	4,472

TABLE No. 7.

Showing the Nationalities of the Prisoners.

Canadians	2,574
English	436
Irish	209
Scotch	186
United States	315
Other nationalities	749
	4,472

TABLES No. 8.

Showing the Crimes for which Prisoners were Committed.

Crimes against the person:	
Assault	89
Cutting, wounding, stabbing, shooting	15
	104

Crimes against property:

Arson and incendiarism	1	
Burglary, house-breaking and larceny	1,121	
Forgery	34	
Fraud and false pretences	103	
Horse stealing	1	
Receiving stolen goods	57	
Trespass	70	
Miscellaneous	7	
		1,394

Crimes against public morals and decency:

Bigamy	12	
Inmates of houses of ill-fame	30	
Keeping houses of ill-fame	44	
Perjury	2	
Seduction	14	
Indecent Assault	42	
Miscellaneous	78	
		222

Offences against public order and peace:

Escaping and obstructing constables	23	
Carrying unlawful weapons	11	
Drunk and disorderly	1,306	
Deserting and absenting from His Majesty's service	4	
Breaches liquor law	737	
Vagrancy	408	
Other offences	263	
		2,752
		4,472

TABLE No. 9.

Showing the Occupations of Prisoners when Committed.

Agricultural	283
Commercial	864
Domestic	439
Labourers	1,909
Mechanics	756
Professional	55
No occupation	167
	4,472

REPORT

OF THE

Board of License Commissioners for Ontario

ON THE OPERATION OF THE

ONTARIO TEMPERANCE ACT

FOR THE YEAR

1921

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty
1922

Printed by
RYERSON PRESS

To His Honour HENRY COCKSHUTT,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your honour the Report of the Board of License Commissioners for Ontario on the Operation of *The Ontario Temperance Act* for 1921.

Respectfully submitted,

W. E. RANEY,

Attorney-General.

Attorney-General's Department,
March 1st, 1922.

REPORT

OF THE

BOARD OF LICENSE COMMISSIONERS FOR ONTARIO

ON THE OPERATION OF THE

ONTARIO TEMPERANCE ACT

FOR THE LICENSE YEAR 1920-1921

OFFICES OF THE BOARD, 25 QUEEN'S PARK,
TORONTO, FEBRUARY 1st, 1922.

TO THE HONOURABLE W. E. RANEY,
Attorney-General of the Province of Ontario.

SIR,—The Board of License Commissioners for Ontario has the honour to submit its Sixth Annual Report covering the operation of The Ontario Temperance Act for the license year of 1920-21, ended April 30, 1921.

THE SCHEDULES.

Schedule "A (1)" shows the number of prosecutions by provincial officers under The Ontario Temperance Act for the license year 1920-1921. The number of convictions of Standard Hotel licensees under this heading were 36, and 10 dismissals, against 4,412 convictions of non-licensees and 968 dismissals. Of the latter, 1,929 convictions and 175 dismissals were upon the charge of being found in a public place in an intoxicated condition. The previous report showed 23 convictions of Standard Hotel licensees and 8 dismissals, as compared with 2,763 convictions of non-licensees and 452 dismissals. The convictions and dismissals shown in the previous report growing out of charges of intoxication in a public place were respectively 1,278 and 139.

Schedule "A (2)" makes a similar return of convictions and dismissals in territory under The Canada Temperance Act for the license year 1920-21 showing 32 convictions and 4 dismissals, as against 36 and 10 respectively in the previous report.

Schedule "B" shows the revenue accruing to the Province under The Ontario Temperance Act from fines imposed thereunder by license districts, the total revenue from this source for the license year being $811,087.56. The previous report showed a total under this head of $273,647.14.

Schedule "C" shows the expenses for enforcing *The Ontario Temperance Act* by district inspectors for the license year 1920-21, the total being $253,357.24 as compared with $144,211.58 in the last report.

Schedule "D" summarizes the sources which go to make up the total revenue from this Branch for the *fiscal* year ending 31st October, 1921, $663,886.76, as compared with $785,788.99 for the previous year. Against this total of $663,886.76 may be placed expenses of law enforcement, including salaries of Provincial and local inspectors, law costs, salaries and disbursements of members of the Board and office staff for the fiscal year, amounting to $482,084.28, leaving a credit balance of $181,802.48.

Schedule "E" shows revenues accruing to municipalities which have appointed officers under Section 120 of The Ontario Temperance Act. These municipalities have received revenues in fines for the year ending 30th April, 1921, of $677,697.50. The revenues from the same source received by the municipalities for the year ending the 30th April, 1920, amounted to $573,676.29, being a considerable increase over the previous year. The former amount, together with the sum received by the Province for the corresponding period, namely, $811,087.56 received between the province and the municipalities of $1,488,785.06 as compared with $847,833.43 in last report.

Schedule "F" shows the distribution of Standard Hotels licensed under Section 146, by license districts, for the license year 1920-21, numbering 1,356.

Schedule "A" shows names of license inspectors and the Districts.

Schedule "H" shows the number of commitments to jail for drunkenness from 1911 to 1921, inclusive.

Permits.

Manufacturers' permits issued under Section 121 for the use of alcohol and other liquor for manufacturing purposes, for license year, numbered 535, supervision of the use of liquor for these purposes having become an important department of the Board's work.

Permits to manufacturers of native wine under Section 44 for the same period numbered 32.

Confiscated Liquor.

The value of confiscated liquor which was sold to the Dispensaries during the fiscal year ending October 31st, 1921, was $118,277.32. A considerable quantity of confiscated liquor was donated to Provincial and other hospitals for medicinal uses. No liquor of doubtful quality has been assigned for medicinal uses either in hospitals or on prescriptions in stores of vendors under the Act.

Value of confiscated liquor on hand 15th January, 1922, $200,037.33.

Quantities of confiscated liquor received at the Dispensary warehouse from May 1st, 1920, to April 30th, 1921:

Cases of Liquor	21,486
Gallons of Liquor	2,683
Cases of Beer	897
Barrels of Beer	90

Success of Prohibition.

It will be generally admitted that Prohibition of the Liquor Traffic has brought great benefits to the people of Ontario. Intoxicated men are rarely seen upon the streets of our cities, towns and villages, and countless families, whose breadwinners formerly wasted their earnings on drink, are now able to live in comfort.

While the Police Court Records still show too large a number of arrests for drunkenness, it is to be remembered that under prohibition well enforced fewer intoxicated men escape arrest.

Violations of the Law.

There are very great difficulties in thoroughly enforcing prohibitory laws. Men who are addicted to the use of liquor do not readily lose their desire for it, and when this desire is catered to by unscrupulous men, violations of the law are the natural result.

Among those responsible for violation of the law are the distiller, the brewer, the wholesale bootlegger, the retail bootlegger, the rum-runner, the manufacturer of illicit liquor, and the thirsty customer.

It is still lawful for the distillers and the brewers to manufacture liquors, and to export them, and a considerable export business is carried on. There is also a considerable distribution of liquors in Ontario by some of these distillers and brewers. Under the pretence of exporting liquor to the United States, or Mexico, the unscrupulous distiller or brewer aids and abets the bootlegger to obtain liquor which is distributed and consumed in Ontario, in direct violation of the Ontario Temperance Act. It should be noted, however, that there are distillers and brewers who refuse to lend themselves to this business.

The wholesale bootlegger imports his liquors from outside the Province, or obtains them within the Province under the pretence that he is exporting them, and the retail bootlegger conveys the liquor to the thirsty customer. In too many cases the wholesale bootlegger and the distiller and brewer escape punishment.

Rum-Running.

There is still a considerable business in transporting liquor into the United States, in direct violation of the laws of that country. Earnest efforts have been made to suppress this illegal business, but little progress can be made unless either the United States authorities become more active in enforcing their laws, or the Canadian Parliament passes legislation effectively checking the business.

Stills.

As might be expected, the number of private stills appeared for a time to be on the increase, but it is hoped that effective means will be found for dealing with this source of danger. The culprit who violates the law of the land by illegally making whiskey seldom shows any concern for the victims who buy or consume his poisonous product. The penalty for this offence might well be made more severe. It should be noted that of those who commit offences against the Act there is a disproportionately large number of foreigners, and of these a still more disproportionately large number are Jews from Poland and Western Russia.

Fines.

The Province collected from fines during the year the sum of $811,087.56; the expenses of enforcing the Act amounted to $253,357.24, leaving an excess of receipts over expenses of $557,730.32. Fines paid to Municipalities at the same time amounted to $677,697.50. Particulars of these fines are set out in schedules "B" and "E."

Ontario Government Dispensaries.

Since the retirement of the former Chairman of the Board, the greater part of the duty of supervising the work of the Government Dispensaries has fallen to the

lot of Mr. Dingman, the Vice-Chairman. The reports of the General Manager and the Auditors furnish very full information.

Some complaints have been received as to what are called excessive prices charged at the Dispensaries, but these prices are largely beyond the control of the Board. The heavy increases of duties which went into effect May 5th, 1921, and the sales tax, are as follows, on each imperial quart.

Scotch and Irish Whiskey	$2.40
Brandy	2.36
Gin	2.35
Canadian Rye Whiskey	1.75

The average duty and sales tax are considerably more than $2.00 per bottle. Ontario prices, however, compare favourably with the prices of other Provinces under Government Commissions. In British Columbia, Quebec, New Brunswick and Prince Edward Island, the prices are often much higher than those in Ontario.

There has been no change in policy in regard to dispensary prices since the Dispensaries were taken over in June, 1919. A gross profit of 33-1/3% is aimed at, and after overhead charges are deducted, this should leave a net profit of about 20%. For the last two years the profits were:

1920. Gross, 41.06%; Net, 25.57%.
1921, Gross, 36.56%; Net, 21.98%.

Through the sympathetic co-operation of the physicians of Ontario, liquor prescriptions on Dispensaries are on the decline, these having been reduced in 1921 by approximately 25% as compared with the previous year. At present they are being filled at the rate of about 600,000 per annum. The reduction is reflected in the returns of profits which, in 1920, were $860,017, and in 1921, $691.598. We may confidently look forward to a still further reduction in the number of medical prescriptions, for it is well known that insistent patients still procure prescriptions which are not needed for medicinal purposes.

In most instances physicians' prescriptions are for imperial quart bottles of forty ounces each, and there is a very general opinion that a much smaller quantity would better meet legitimate requirements.

Prescriptions on Druggists.

It should be pointed out that the Board has no control over the quantity of liquor purchased by druggists, and it is feared that in the case of at least a few druggists unlawful traffic in liquor for beverage purposes is carried on. The Board has no power to limit the number of prescriptions issued upon druggists by physicians, and in the case of a few physicians it is found that they issue excessive numbers.

Essences, Patent and Proprietary Medicines, etc.

There is undoubtedly, in some places, a considerable traffic in essences, extracts, proprietary medicines and the like, containing a large proportion of alcohol, and it is believed that these are sold and used for beverage purposes, but proof is sometimes difficult to obtain.

Standard Hotels.

Standard hotels are regularly inspected by Officers of the Board, and many of them are found, all things considered, to be in a satisfactory state. The hotel-keeper is prevented from enjoying what was formerly a very profitable trade at the bar, and it takes time and effort to adjust himself to new conditions.

It should be generally recognized that a well-conducted hotel is a valuable asset to any municipality. It may not be out of place to call attention to the unquestionably great opportunity which the Province of Ontario has to cultivate a lucrative tourist traffic. The Province has lakes and rivers, forests and hills, climate and other advantages to offer to tourists. There are hundreds of thousands of Americans who own automobiles and are looking to Ontario for spending a few weeks, or months, in the summer. Until recently most of our attractive resorts have not been easily accessible: the Province is now, by degrees, overcoming this difficulty.

An equally important matter is the catering to these visitors when they come. In addition to the setting apart of parking places where visitors can rest, or put up tents, etc., there should be better hotel accommodation, and it is felt that, in order to secure better hotel accommodation, some encouragement should be given to hotel-keepers. If municipalities were to reduce the taxes to be paid by hotels, this should prove an excellent investment, and the municipalities would be repaid many times over by the expenditure of money by tourists. Along with this improvement of hotels should go a well-planned scheme of advertising the attractions which the various parts of the Province afford.

It has been said that a hundred million dollars per annum would easily be available to the people of Ontario, from tourists, when adequate provision is made for taking care of them. This will easily leave a sum of not less than two million dollars available for the average county. The loss of revenue which any municipality would suffer through a reduction of taxes on well-kept hotels would be slight, when compared with the advantage there would be from the expenditure of so large a sum of money.

Changes in Personnel.

At the end of May, 1921, Mr. J. D. Flavelle retired from the Chairmanship of the Board, an office which he had filled from the date of its formation. During his tenure of office he rendered a very great public service to the people of Ontario, and his departure was greatly regretted.

After the resignation of Mr. Flavelle, the duties of the Chairman were discharged by the Vice-Chairman until the twenty-third day of August, when the present Chairman was appointed.

Respectfully submitted,

James Hales,
Chairman.

SCHEDULE A (1)

Statement showing number of prosecutions by provincial officers of cases for infractions of the Ontario Temperance Act for the license year ending April 30th, 1921.

License District.	Against Holders of Standard Hotel Licenses.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Algoma	.....	.....	87	16
Brant and Haldimand	.....	1	43	31
Bruce	2	.....	28	2
Carleton	2	.....	10	.....
Dufferin and part Co. Simcoe	1	.....	19	14
Dundas and Stormont	.....	.....	116	52
Elgin	.....	.....	50	14
Essex	.....	.....	116	26
Frontenac, including Kingston	.....	1	50	11
Glengarry	2	.....	47	16
Grenville	.....	.....	104	13
Grey	.....	.....	61	25
Guelph and part Co. Wellington	.....	.....	21	1
Halton	.....	.....	139	13
Hamilton and part Co. Wentworth	8	4	39	24
Hastings	.....	1	67	31
Huron, (under Canada Temperance Act-part of year)	1	.....	108	11
Kent	.....	.....	38	16
Kenora	.....	.....	21	3
Lambton, East	.....	.....	72	9
Lambton, West	.....	.....	60	7
Lanark	.....	.....	65	29
Leeds, including Brockville	.....	.....	127	13
Lennox and Addington	.....	.....	51	11
Lincoln	.....	.....	38	12
Manitoulin (Canada Temperance Act)	.....	.....	25	4
Middlesex, including London	1	.....	30	8
Nipissing	.....	.....	124	4
Niagara Falls and part Co. Welland	.....	.....	282	7
Norfolk	.....	.....	38	13
Northumberland and Durham	1	.....	57	10
Ontario	.....	.....	76	10
Ottawa, including Eastview	.....	.....	15	3
Oxford	.....	.....	44	1
Parry Sound	.....	.....	112	19
Peel (under Canada Temperance Act)	.....	.....	.....	.....
Perth (under Canada Temperance Act), including Stratford (Ontario Temperance Act)	.....	.....	72	5
Peterboro	.....	.....	20	4
Port Arthur and Fort William	2	.....	110	10
Prescott	1	.....	63	.....
Prince Edward and part Co. Hastings	.....	.....	75	13
Rainy River	.....	.....	94	34
Renfrew	.....	.....	75	8
Russell	4	1	44	
Sault Ste. Marie	.....	.....	77	29
Simcoe, and Muskoka	2	.....	45	18
Sudbury	.....	.....	254	86
Temiskaming	.....	.....	424	23
Toronto	8	1	125	72

SCHEDULE A (1)—Continued.

License District.	Against Holders of Standard Hotel Licenses.		Against Non-Licensees.	
	No. of Convictions.	No. of Dismissals.	No. of Convictions.	No. of Dismissals.
Victoria and Haliburton			77	9
Waterloo	1	1	66	24
Welland			73	14
Wellington			29	5
Wentworth			17	3
Windsor			283	125
York			9	2
Totals	36	10	4,412	968
Totals, previous report	23	8	2,763	452

Included in the foregoing cases are 1929 convictions and 175 dismissals under charges of being found in a public place in an intoxicated condition, as compared with 1,278 and 139 respectively in previous report.

SCHEDULE A (2)

Statement showing number of convictions and dismissals under charges of violations of the Canada Temperance Act during the year ending April 30th, 1921.

License District.	Convictions.	Dismissals.
Huron, North	3	1
Huron, South	9	1
Manitoulin	3	
Peel	10	1
Perth (excluding the City of Stratford)	7	1
Totals	32	4
Totals, previous report	36	10

SCHEDULE B

Statement showing amounts collected and payable to the Province for fines imposed under the Ontario Temperance Act, in each License District, for the License year ending the 30th April, 1921.

	$ c.
Algoma	6,475 00
Brant and Haldimand,	8,590 00
Bruce	5,830 00
Carleton	2,770 00
Dufferin and Simcoe	915 00
Dundas and Stormont	12,857 36
Elgin	5,734 00
Essex	106,559 00
Frontenac	3,410 00
Glengarry	5,800 05
Grenville	7,120 00
Grey	6,110 00
Guelph	1,517 00
Halton	2,420 00
Hamilton	11,450 00
Hastings	4,560 00
Huron	3,385 00
Kent and Chatham	8,124 00
Kenora	1,884 56
Lambton East	2,874 00
Lambton West	7,045 00
Lanark	3,420 00
Leeds	10,548 53
Lennox and Addington	2,875 00
Lincoln	13,719 52
Middlesex	6,215 00
Nipissing	16,190 00
Niagara Falls	31,755 00
Norfolk	1,975 00
Northumberland and Durham	6,540 00
Ontario	5,933 00
Ottawa	2,940 00
Oxford	920 00
Parry Sound	4,884 20
Peterborough	2,640 00
Port Arthur and Fort William	26,833 00
Prescott	4,758 00
Prince Edward and part of Hastings	8,875 00
Rainy River	21,342 50
Renfrew	7,730 00
Russell	7,066 00
Sault Ste. Marie	13,260 00
Simcoe and Muskoka	7,820 00
Sudbury	36,180 75
Temiskaming	23,011 50
Toronto	24,060 00
Victoria and Haliburton	3,555 00
Waterloo	18,225 00
Welland	18,510 00
Wellington	2,565 00
Windsor	248,206 50
Wentworth	2,700 00
York	2,200 00
	802,883 47
ADDITIONAL	
Manitoulin	.....
Huron North	471 04
Huron South	439 05
Perth	7,294 00
Peel	.....
Total	811,087 56
Total previous report.	273,647 14

SCHEDULE C

Statement showing expenses of enforcing Ontario Temperance Act in each License District for the license year ending 30th April, 1921.

	$ c.		$ c.
Algoma	4,181 90	Peterborough	2,251 62
Brant and Haldimand	3,638 14	Port Arthur and Fort William	4,323 70
Bruce	2,732 01	Prescott	3,569 17
Carleton	3,487 94	Prince Edward and part of Hastings	4,253 24
Dufferin	2,771 85	Rainy River	5,190 81
Dundas and Stormont	5,364 42	Renfrew	2,575 89
Elgin	2,546 91	Russell	4,563 01
Essex	16,501 94	Sault Ste. Marie	3,565 44
Frontenac	3,323 85	Simcoe and Muskoka	3,749 99
Glengarry	2,991 19	Sudbury	16,720 83
Grenville	5,086 06	Temiskaming	4,523 27
Grey	3,772 83	Toronto	6,723 73
Guelph	2,694 72	Victoria and Haliburton	2,958 21
Halton	2,259 01	Waterloo	4,610 57
Hamilton	5,304 26	Welland	5,716 74
Hastings	4,241 34	Wellington	724 62
Kent	3,833 11	Wentworth	2,057 02
Kenora	1,337 10	Windsor	46,108 16
Lambton, East	2,341 71	York	2,266 80
Lambton, West	3,241 49		250,000 11
Lanark	3,954 78		
Leeds	3,129 64		
Lennox and Addington	2,557 67		
Lincoln	3,048 40	ADDITIONAL	
Middlesex	3,445 03		
Nipissing	5,226 61	Huron, North	227 59
Niagara Falls	4,218 81	Huron, South	363 42
Norfolk and Haldimand	2,832 92	Perth	2,582 08
Northumberland and Durham	2,758 52	Manitoulin	184 04
Ontario	3,575 49		
Ottawa	2,479 31	Total	253,357 24
Oxford	1,699 45		
Parry Sound	2,958 88	Total previous report.	144,211 58

SCHEDULE D

Statement showing revenue from License Branch for the fiscal year ending **31st October, 1921.**

Vendors' License Fees	15 00	Confiscated Liquor	118,277 32
Standard Hotel Fees	1,625 00	Sundries	4,522 53
Fines	539,446 91		
		Total	663,886 76
		Total previous report.	785,788 99

SCHEDULE E

Showing fines imposed under the Ontario Temperance Act, paid to the Municipalities where special officers have been appointed under Section 120 of the Ontario Temperance Act for license years 1919-20 and 1920-21 respectively.

—	To 30th April, 1920	To 30th April, 1921	—	To 30th April, 1920	To 30th April, 1921
	$ c.	$ c.		$ c.	$ c.
Amherstburg	199 00	5060 00	Dymond	500 00	130 00
Arnprior	.....	1490 00	Englehart	.....	270 00
Aylmer	195 00	672 00	Elmira	210 00	290 00
Acton	10 00	75 00	Edswardburg	.....	.....
Ailsa Craig	.....	.....	Elora	.....	.....
Alexandria	.....	210 00	Fort William	20,462 00	29,415 00
Brantford	6,964 00	11,490	Ford City	5,154 25	2,750 00
Bancroft	35 00	90 00	Fort Erie	10 00	135 00
Bowmanville	140 00	820 00	Fort Frances	780 00	1,560 00
Brighton	.....	.....	Galt	1,030 00	2,050 00
Brockville	2,102 95	5,356 25	Guelph	3,898 00	3,339 00
Blenheim	.....	200 00	Gananoque	600 00	627 00
Blenheim Tn	50 00	290 00	Georgetown	71 00	340 00
Belleville	2,188 26	8,979 10	Gravenhurst	270 00	.....
Bradford	10 00	10 00	Hamilton	29,900 00	32,950 00
Blind River	1,490 00	4,027 50	Hespeler	990 00	840 00
Burlington	165 00	1,683 75	Hagersville	10 00	35 00
Burk's Falls	.....	.....	Haileybury	1,672 00	1,952 50
Bridgeburg	270 00	301 00	Hanover	645 00	55 00
Barrie	554 00	730 00	Hawkesbury	2,510 00	1,245 00
Blandford	.....	220 00	Hastings	.....	.....
Bayham	.....	.....	Hepworth	25 00	.....
Bothwell	.....	200 00	Humberstone	.....	10 00
Beverly	240 00	.....	Huntsville	190 00	1,340 00
Caldwell	.....	418 00	Huron County	.....	880 00
Capreol	.....	100 00	Ingersoll	350 00	1,290 00
Cobourg	985 00	810 50	Iroquois Falls	1,835 00	1,224 00
Colborne	75 00	180 00	James Twp.	.....	.....
Carleton Place	544 00	893 50	Kenora	837 00	1,075 00
Cobalt	5,620 00	6,637 80	Kincardine	.....	482 00
Cochrane	3,510 00	6,984 00	Kitchener	6,535 25	7,522 50
Courtright	.....	.....	Kingston City	6,053 00	4,600 00
Copper Cliff	5,190 00	5,140 00	Kingston Twp.	.....	.....
Chapleau	800 00	1,185 00	Kent County	6,680 00	28,926 00
Campbellford	520 00	1,415 00	Keewatin	.....	.....
Chesley	.....	415 00	Leamington	1,928 00	1,030 00
Cardinal	40 00	120 00	Lion's Head	.....	10 00
Charlton	20 00	.....	Listowel	.....	15 00
Coldwater	.....	.....	Lucknow	175 00	270 00
Chelmsford Tn.	20 00	20 00	London	18,447 00	21,090 00
Cornwall	2,230 00	2,535 00	Lucan	50 00	.....
Cayuga	.....	245 00	Lanark V.	.....	42 00
Collingwood	730 00	1,495 00	Lakefield	30 00	85 00
Cannington	35 33	.....	Lindsay	1,755 00	840 00
Chatham	2,310 00	7,875 00	McDougall Tp.	.....	.....
Clifford	.....	.....	Mattawa	1,444 00	1,022 20
Crowland	11,400 00	5,085 00	Midland	555 00	1,050 00
Calvert	.....	.....	Madoc	.....	781 00
Chapman	.....	.....	Massey	500 00	245 00
Coleman	.....	.....	Merritton	200 00	200 00
Dunnville	95 00	55 00	Meaford	.....	265 00
Dresden	730 00	595 60	Matheson	.....	.....
Dutton	.....	.....	Milton	.....	1,015 00
Drury, Denison and Graham	1,050 00	350 00	Mount Forest	380 00	316 00
Dundas	780 00	740 00	Magnetawan	.....	.....
Dryden	25 00	.....	North Bay	4,195 00	6,020 00
Deseronto	800 00	285 00	Niagara Falls	16,431 00	8,340 00
			Napanee	455 00	348 00

SCHEDULE E—Continued.

—	To 30th April, 1920	To 30th April, 1921	—	To 30th April, 1920	To 30th April, 1921
	$ c.	$ c.		$ c.	$ c.
Niagara Tn.	30 00	20 00	Schreiber	.....	400 00
New Liskeard	10 00	230 00	Seaforth	.....	.....
Nepean	260 00	.....	Sault Ste. Marie	27,456 70	55,788 25
Neustadt	.....	.....	Sturgeon Falls	470 00	3,510 00
Neelon & Garson	3,095 00	2,120 00	Sarnia	1,585 00	7,955 00
Norwood	.....	.....	Sudbury	19,280 00	20,700 00
Newmarket	.....	.....	St. Catharines	6,193 00	12,654 00
Norwich North	.....	.....	St. Thomas	2,700 00	558 00
Norwich V.	60 00	.....	Smith's Falls	4,050 00	4,760 00
Nipigon	1,580 00	2,540 00	Stratford	930 00	8,094 60
Ottawa	36,180 00	20,963 00	Simcoe	277 00	265 00
Orangeville	20 00	330 00	St. Vincent	.....	.....
Oshawa	9,287 90	8,577 20	Sandwich	5,240 50	11,723 00
Oakland Tp.	.....	.....	Sherbrooke Tp.	.....	.....
Owen Sound	1,650 00	3,467 00	Sioux Lookout	1,000 00	875 00
Oxford West Tp.	.....	390 00	St. Mary's	330 00	620 00
Oakville	3,135 00	2,773 00	Stamford Tp.	.....	.....
Port Arthur	22,176 00	24,257 40	Teck	1,790 00	2,130 00
Preston	2,070 00	2,650 00	Toronto	135,500 00	86,525 00
Picton	610 00	1,075 00	Tillsonburg	.....	768 00
Pakenham	.....	.....	Trenton	3,446 00	10,745 00
Paris	570 00	990 00	Tisdale Tp.	6,882 25	5,033 50
Parry Sound	2,975 00	3,925 00	Timmins	9,147 50	13,687 00
Port Hope	.....	165 00	Thamesville	710 00	30 00
Peterboro	2,220 00	4,700 00	Thessalon	396 00	270 00
Pembroke	1,260 00	2,130 00	Thorold Tn.	.....	5,992 15
Petrolia	420 00	655 00	Thorold Tp.	153 50	3,185 05
Perth	2,050 00	2,050 00	Vankleek Hill	10 00	30 00
Portsmouth	.....	.....	Woodstock	960 00	2,915 00
Port Perry	.....	.....	Walkerville	5,436 50	10,102 90
Port Stanley	578 00	558 00	Woodhouse	.....	.....
Prescott	5,953 90	460 00	Wallaceburg	995 00	2,629 00
Parkhill	.....	.....	Wiarton	300 00	6 00
Paisley	.....	1,140 00	Welland Tn.	6,934 50	4,219 50
Port Colborne	4,981 75	7,284 80	Windsor	30,031 25	40,946 45
Port Rowan	.....	.....	Walkerton	220 00	830 00
Point Edward	.....	.....	Waterloo	695 00	440 00
Penetanguishene	709 00	1,133 50	West Zorra	.....	.....
Port McNicoll	200 00	240 00	Whitby Tn.	.....	465 00
Pelee Tp.	.....	30 00	Winchester	500 00	.....
Renfrew, Tn.	130 00	400 00	York County	8,470 00	4,290 00
Rainy River	.....	4,400 00	Zorra, East	.....	445 00
Rayside Tp.	.....	.....			
Ridgetown	.....	655 00	Total	573,676 29	677,697 50

SCHEDULE F

Showing the number of Standard Hotels licensed under Section 146 in each License District for license year ending 30th April, 1921.

Algoma	21	Ontario	15
Brant	23	Ottawa City	27
Bruce	42	Oxford	25
Carleton	5	Parry Sound	21
Dufferin and Simcoe	26	Perth	23
Dundas and Stormont	30	Peterborough	27
Elgin	28	Port Arthur and Fort William	18
Essex (excluding Windsor)	9	Prescott	24
Frontenac	33	Prince Edward and Hastings (including Belleville)	24
Glengarry	9	Rainy River	12
Grenville	7	Renfrew	40
Grey	36	Russell	21
Guelph and Wellington	21	Sault Ste. Marie	8
Halton	13	Simcoe and Muskoka	78
Hamilton City	51	Sudbury	18
Hastings	22	Temiskaming	24
Kenora	7		
Kent	25	Toronto City	108
Lambton East	13	Victoria and Haliburton	24
Lambton West	18	Waterloo	46
Lanark	23	Welland (including all but River municipalities)	10
Leeds	19	Wellington	15
Lennox and Addington	18	Wentworth	16
Lincoln	21	Windsor	22
Middlesex (including London)	43	York	39
Niagara Falls (including River municipalities)	20		
Nipissing	22		
Norfolk	30		1,363
Northumberland and Durham	45		

SCHEDULE G—LICENSE INSPECTORS.

License District.	Inspector.	P. O. Address.
Algoma	Jas Grigg	Bruce Mines.
Brant	R. J. Eacrett	Brantford.
Bruce		Walkerton.
Carleton, including Ottawa	Howard Graham	44 3rd Avenue, Ottawa.
Dufferin and part Co. Simcoe	T. J. Robinson	Orangeville.
Dundas and Stormont	E. P. Foster	Morrisburg.
Elgin, including St. Thomas.	Walter Ross	St. Thomas.
Essex	J. E. Stone	Essex.
Frontenac, including Kingston	Wm. McCammon	Kingston.
Glengarry	Wm. McCready	Alexandria.
Grenville		Ventnor.
Grey	M. C. Beckett	Owen Sound.
Halton		Acton
Hamilton,		Hamilton.
Hastings	W. T. Nugent	Belleville.
Huron	W. T. Pellow	Goderich.
Kent	Matthew Side	Chatham.
Kenora	W. Parfitt (Retiring)	Keewatin.
Lambton, East		Wyoming.
Lambton, West, including Sarnia	J. W. Coulter	Sarnia.
Lanark	J. J. McGregor	Carleton Place.
Leeds, including Brockville	F. B. Taber	Brockville.
Lennox and Addington	W. S. Exley	Napanee.
Lincoln, including St. Catharines	J. W. King	St. Catharines.
Manitoulin (Canada Temp. Act)	Wm. Vincer	Mindemoya.
Middlesex, including London	J. E. Keenleyside	London.
Nipissing	F. A. Bell (acting)	North Bay.
Niagara Falls, including part Co. Welland		Niagara Falls.
Norfolk	R. Edmonds	Simcoe.
Northumberland and Durham	G. Goodrich	Cobourg.
Ontario	C. A. Mason	Oshawa
Oxford, including Woodstock		Woodstock.
Parry Sound	Jno. Atkins	Parry Sound.
Peel	R. Reevely	Brampton.
Perth, including Stratford	F. E. Elliott	Stratford.
Peterboro	Jos. Stewart	Peterboro.
Port Arthur & Fort William	A. R. Elliott	Port Arthur.
Prescott	Arthur De Haitre	Hawkesbury.
Prince Edward, including part Co. Hastings and Belleville	F. J. Naphan	Belleville.
Rainy River	W. T Pullen (acting)	Fort Frances.
Renfrew	D. Silvester (acting)	Renfrew.
Russell	A. G. Sykes	Ottawa.
Sault Ste. Marie	Philip Walter	Sault Ste Marie
Simcoe and Muskoka	J. R. Reid	Orillia.

SCHEDULE G—Concluded.

License District.	Inspector.	P. O. Address.
Sudbury	T. N. Kilpatrick	Sudbury.
Temiskaming	W. S. Blackwall	Haileybury.
Toronto	A. A. Montgomery	Toronto.
Victoria and Haliburton	Wm. Thornbury	Lindsay.
Waterloo, including Kitchener and Galt	J. A. Grant	Guelph
	E. Zinkann	Kitchener.
Weliand	Geo. A. Ekins	Welland.
Wellington		
Wentworth	J. W. Dickson	Dundas.
Windsor	M. N. Mousseau	Windsor.
York	D. Mackenzie	Woodbridge.

A table sho
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h, 1922

Name of Gaol	
Barrie	
Belleville	
Brantford	
Brampton	
Brockville	
Bracebridge	
Cayuga	
Cornwall	
Cobourg	
Chatham	
Fort Frances	
Goderich	
Guelph	
Gore Bay	
Hamilton	
Kingston	
Kitchener	
Kenora	
London	
Lindsay	
L'Orignal	
Milton	
Napanee	
North Bay	
Ottawa	
Owen Sound	
Orangeville	
Perth	
Picton	
Pembroke	
Peterborough	
Port Arthur	
Parry Sound	
Simcoe	
St. Catharines	
Sarnia	
Stratford	
Sandwich	
St. Thomas	
Sault Ste. Marie	
Sudbury	
Toronto	
Walkerton	
Woodstock	
Welland	
Whitby	
Lock ups:	
Atikokan	
Burk's Falls	
Byng Inlet	
Cobalt	
Killarney	
Manitowaning	
Mine Centre	
Webbwood	
Totals	

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SCHEDULE H.

A table showing the number of commitments to each gaol for drunkenness during the years 1911 to 1921, both inclusive. The figures for 1920 and 1921 are compared, and the increase or decrease in each place is shown.

Name of Gaol	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	Increase 1921	Decrease 1921	Name of gaol
Barrie	51	57	64	141	73	43	6	4	.....	3	15	12	.....	Barrie
Belleville	89	56	110	63	106	57	23	2	4	18	3	.....	15	Belleville
Brantford	129	161	131	108	162	193	25	33	60	49	60	11	.....	Brantford
Brampton	10	8	14	2	11	4	4	2	1	12	3	.....	9	Brampton
Brockville	59	49	83	62	56	60	12	7	19	16	13	.....	3	Brockville
Bracebridge	3	1	3	4	1	.....	1	.....	.....	1	1	.....	.....	Bracebridge
Cayuga	5	6	4	5	7	10	1	.....	.....	1	6	5	.....	Cayuga
Cornwall	10	9	16	27	20	9	7	6	2	11	5	.....	6	Cornwall
Cobourg	22	35	39	36	16	60	22	2	4	1	5	4	.....	Cobourg
Chatham	36	44	46	83	55	84	27	14	15	24	37	13	.....	Chatham
Fort Frances	55	57	184	149	52	42	30	10	24	1	.....	.....	1	Fort Frances
Goderich	8	6	13	6	13	8	2	3	.....	1	.....	.....	1	Goderich
Guelph	7	3	9	16	14	2	.....	4	1	2	2	.....	.....	Guelph
Gore Bay	5	1	.....	.....	3	4	.....	3	.....	1	5	4	.....	Gore Bay
Hamilton	580	702	986	603	494	761	129	109	127	152	199	47	.....	Hamilton
Kingston	90	107	135	129	203	115	28	23	26	36	43	7	.....	Kingston
Kitchener	18	24	30	48	34	32	18	7	1	16	6	.....	10	Kitchener
Kenora	15	101	25	19	7	8	4	4	1	2	3	1	.....	Kenora
London	395	361	483	500	520	473	155	196	132	166	189	23	.....	London
Lindsay	30	7	3	9	5	3	1	1	.....	1	6	5	.....	Lindsay
L'Orignal	2	1	5	2	1	1	1	.....	3	.....	2	2	.....	L'Orignal
Milton	4	12	11	12	4	8	3	6	.....	.....	.....	.....	.....	Milton
Napanee	21	23	25	45	18	8	.....	.....	3	.....	.....	.....	.....	Napanee
North Bay	18	88	90	93	55	9	8	2	12	16	35	19	.....	North Bay
Ottawa	307	324	248	346	281	127	391	187	69	250	180	.....	70	Ottawa
Owen Sound	73	65	18	17	24	30	10	2	2	2	3	1	.....	Owen Sound
Orangeville	1	3	1	1	1	.....	1	.....	.....	.....	.....	.....	.....	Orangeville
Perth	8	20	31	22	19	13	.....	7	1	3	1	.....	2	Perth
Picton	31	26	28	32	47	50	2	3	4	4	1	.....	3	Picton
Pembroke	8	20	50	50	44	27	13	3	.....	7	2	.....	5	Pembroke
Peterborough	40	37	119	143	87	71	11	1	11	6	13	7	.....	Peterborough
Port Arthur	232	301	434	444	212	111	42	17	19	92	156	64	.....	Port Arthur
Parry Sound	35	50	58	55	79	516	35	30	32	31	45	14	.....	Parry Sound
Simcoe	39	41	8	32	25	26	2	2	.....	4	4	.....	.....	Simcoe
St. Catharines	73	67	60	102	82	80	31	13	13	27	64	37	.....	St. Catharines
Sarnia	76	90	157	237	138	132	115	42	9	30	38	8	.....	Sarnia
Stratford	29	36	67	73	34	36	5	1	3	7	17	10	.....	Stratford
Sandwich	32	31	65	44	31	28	116	32	7	102	119	17	.....	Sandwich
St. Thomas	11	5	17	48	30	12	4	11	5	12	31	19	.....	St. Thomas
Sault Ste. Marie	49	66	75	73	75	30	59	32	33	80	99	19	.....	Sault Ste. Marie
Sudbury	316	508	1,054	1,643	658	531	211	125	276	719	783	64	.....	Sudbury
Toronto	2,669	2,866	3,209	3,073	2,217	1,939	2,217	1,593	2,440	2,486	2,368	.....	118	Toronto
Walkerton	9	6	5	4	9	4	2	1	1	.....	1	1	.....	Walkerton
Woodstock	41	45	52	77	69	86	9	19	27	33	32	.....	1	Woodstock
Welland	29	55	60	131	110	30	95	16	18	31	90	59	.....	Welland
Whitby	12	8	10	17	14	16	2	1	4	30	15	.....	15	Whitby
Lock ups:														Lock-ups
Atikokan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Atikokan
Burk's Falls	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Burk's Falls
Byng Inlet	11	.....	1	.....	4	6	3	.....	.....	.....	.....	.....	.....	Byng Inlet
Cobalt	25	10	1	20	11	15	22	15	4	22	17	.....	5	Cobalt
Killarney	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Killarney
Manitowaning	2	7	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Manitowaning
Mine Centre	.....	6	4	3	4	.....	2	4	2	3	2	.....	1	Mine Centre
Webbwood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Webbwood
Totals	5,827	6,613	8,363	8,848	6,235	5,968	3,907	2,595	3,415	4,511	4,719	473	265	Totals

Net Increase 208

ONTARIO GOVERNMENT DISPENSARIES

Toronto, January 24th, 1922

James Hales, Esq., K.C.,
Chairman,
Board of License Commissioners,
25 Queen's Park,
Toronto.

Dear Sir,—I beg herewith to present my annual report covering the operations of the dispensaries for the year 1921.

Public Service.

During the past year the dispensaries have continued to maintain the efficient service to the public which has been an outstanding feature in the work ever since the establishment of the dispensaries.

We have continued to make certain that wherever possible mail orders are despatched on the day when same are received. Mail order shipments averaged 6750 per month, and with very few exceptions reached their destination without being tampered with en route. Very few complaints were received during the year; in fact, considering the volume of business the number was infinitesimal. We paid in express charges alone for the mail order service $16,326.28.

In every city where a dispensary is located we have a delivery service by auto truck, and particularly in the large centres very many deliveries are made daily. Physicians, druggists, dentists and hospitals find this service of great value.

A new dispensary, known as No. 8, was opened at Fort William on the first of February, 1921, and from the amount of business done during the year proved that a good move was made, particularly from the standpoint of public service, as hitherto residents of the north-western portion of Ontario had to send their orders to Toronto, and a considerable number of days elapsed before the liquor reached them. The staff secured were all residents of Fort William and men who had all seen overseas service.

To meet the requirements of druggists who felt themselves unable to purchase six ounce liquors of various kinds in case lots, we prepared an "assorted case," for which we have had considerable demand. We have also recently commenced to bottle alcohol in imperial pint bottles. It is our policy when good suggestions are made to adopt them if at all feasible.

Advisory Committee.

At the end of May, Mr. W. B. Cleland, Vice-Chairman of the Advisory Committee, and General Manager of the Dispensaries up to November first, 1920, resigned from his position on the same date as Mr. J. D. Flavelle resigned the Chairmanship of the Board of License Commissioners. The loss of both Mr. Flavelle and Mr. Cleland was deeply regretted, as the splendid services given by both of these gentlemen had unquestionably materially assisted in the high state of efficiency reached in the work of the dispensaries. The Advisory Committee was reconstructed, and now consists of the Vice-Chairman of the Board, the General Manager, the Secretary-Treasurer and the Chief Inspector.

Staff.

The spirit of loyalty manifested by all our employees from the opening of the dispensaries was continued during last year. No changes of any consequence had to be made, as we had very few resignations, none amongst our chief officials.

Practically no complaints were received from the public with respect to the work of our employees, which we feel reflects great credit on the dispensaries when it is remembered that employees are coming into close contact with the public for many hours in every working day of the year. The policy of employing only returned men when vacancies occur, was rigidly adhered to. The dispensaries now employ 147 persons.

Prices of Liquors.

The setting of the prices of the various liquors received the most careful consideration from the Advisory Committee of the dispensaries.

On May 10th, 1921, the Parliament of Canada increased the duty on Canadian spirits from $4.40 to $9.00 per proof gallon, and the duty on imported spirits from $5.00 to $10.00 per proof gallon, an increase of 100%, and the Sales Tax was likewise increased. An increase in the price of the liquors affected by the increase in duty was made on May 19th. The entire increase in duty and Sales Tax was not included in the new prices of imported whiskies, gins and brandies, because it had been felt that a substantial increase in duties was about to be made, and we had cleared a very large quantity of the liquors in our Customs Bonded Warehouses. At the end of September we felt compelled to make a slight increase in Scotch whiskies, as the stock of Scotch out of bond at Central Warehouse had practically become exhausted. A further increase in the price of Scotch and Irish whiskies was made in the early part of January of this year, the new prices being, in all probability, the prices that would have been set in May had we not then had in our warehouses a good supply duty paid. In addition to the very heavy increase in duties, the continued rise in Sterling toward the end of last year had to be considered in the setting of prices.

It is perhaps not very well known that in addition to paying Sales Tax on the duty collected, as well as on the invoice price of the liquors, that in the case of imported liquors, Sales Tax has to be paid on the Excise that would have been collected in the country from which the liquors were purchased, had liquors been sold there for home consumption.

The unprecedented increase in duties, as well as our having stocks on hand on which the duty had been paid, and liquors in bond on which no duty had been paid, and the arrival of further shipments on which new duty had to be paid, as well as the increase in Sterling, made the matter of price setting a most difficult situation to deal with.

Fortunately Parliament provided that in the case of hospitals a drawback of 99% of the duty paid on alcohol should be given, but the price to druggists and to the public had of necessity to become very high. We had a quantity of grain alcohol, imported from the United States, in bond when duty was increased, and when new duty and sales tax had been paid, and alcohol had been placed in containers, we found cost of same to have been $19.03 per gallon. Since last summer we have been handling nothing but domestic alcohol.

Our purchase of eight year old Canadian rye whiskey, which we put up in forty ounce and six ounce bottles, proved most fortunate to the public, as on

account of our having paid duty previous to increase being made, we have been enabled to sell same at a much lower price than other Canadian whiskies. To the former General Manager must be given the credit for this purchase.

Accounting.

A very high state of efficiency is demanded in connection with our accounting, as a most complete record has to be kept of every transaction. Daily reports are forwarded to the Head Office by all the dispensaries containing an account of every bottle or case of liquor sold. All prescriptions and requisitions are also forwarded every day and checked by Head Office with the Daily Sales Reports from the dispensaries. Inventories are taken at the dispensaries on the fifteenth and last day of every month, and an independent inventory is taken by our inspection staff who visit each dispensary very frequently. Ledgers are kept both at Head Office and at the dispensaries, and if inventories do not check with Head Office ledgers, report is immediately asked for. Deposits must be made each day by dispensary managers with our bankers, and a duplicate deposit slip sent to Head Office.

Purchases.

Very few orders for imported liquors were given during the past year as the stocks on hand and the shipments arriving, the result of previous commitments were sufficient to meet all requirements. It must, however, be pointed out that there was a very heavy decrease in the number of prescriptions and requisitions compared with the previous year. A comparison of the last eleven months of 1920 and the same months for 1921 shows a decrease in prescriptions and requisitions of 189,597. As the Censor's Department was not established until February 1st, we have no authentic record for January 1920, but no doubt a further decrease for 1921 would be shown if the January 1920 record were obtainable. A number of reasons, no doubt, contributed to the decrease: the decision of the Board to limit physicians' prescriptions to fifty per month, the fact that many people imported large quantities of liquor after the Province had voted to prohibit further importations, our records showing a very heavy decline in June and July, the latter month being the last month during which liquor could be imported, and the fact that there was no great outbreak of influenza during the winter of 1921.

In 1920 sales showed 75% imported liquors, 25% Canadian. Last year the sales were, practically speaking, in so far as value of liquors was concerned, 65% imported, 35% domestic, and with respect to number of gallons, 55% imported, 45% domestic.

Financial Statements

Sales:—The total sales for the past year amounted to $3,236,588.45 as against $3,553,677.55 in 1920. While, as previously indicated, there was a very noticeable falling off in the number of prescriptions and requisitions passing through the dispensaries, nevertheless, when compared with 1920, our total sales show only a decrease of $317,089.10. The comparatively small decrease in the amount of the sales is to be attributed to the higher selling prices of the liquor sold. The daily average of our sales was $10,384.00.

Gross Profits:—We continued to work on the basis, as in previous years, of 33⅓% gross. The average gross on Canadian goods was about 29%, while on im-

ported goods average gross was somewhat higher. Our average gross on all sales was 36% as against 40% in 1920.

PAYMENTS:—During the year we handed over to the Provincial Treasurer the sum of $525,000.00, in which was included the sum of $200,000.00 in repayment of a loan which we borrowed to aid us in paying duties on liquors in bond just previous to duty being increased in May. We fully expected to have paid over to the Provincial Treasurer a much larger sum, but were unable to do so owing to (1) the repayment of loan just referred to; and (2) increase of assets in the form of stocks on hand caused by the decline in business during spring and early summer months owing to heavy importations of liquor into the Province, and payments for goods received during the year, ordered before we were aware that the Board intended to reduce the number of prescriptions that physicians could issue monthly, which naturally had the effect of reducing the volume of our sales. As we now have very few foreign commitments to meet, and a large stock of liquors in our warehouses, we believe we are now in a position to make substantial payments each month of the year, unless some further change takes place in the customs and excise duties, or some other, at present, unforeseen changes.

OVERHEAD:—The percentage of overhead expenses was 14.58, in which are included discounts to doctors and druggists, amounting to 2.7 and prepaid express charges 2.5. Operating expenses other than discounts and mail order expenses, were 9.38 as against 8.76 of the preceding year, but in connection with this item, it should be noted that an additional dispensary was in operation during the year. Discounts to physicians were discontinued last May. Express rates were increased 35% in February last.

BREAKAGE:—Our interior and irrecoverable breakage amounted to .04%, so that we remained well within the maximum amount allowed to dispensaries for accidental breakage of .075%.

Criticism is not spared with respect to breakage, and we believe we are safe in stating that the utmost precaution is taken in the handling of cases and bottles by warehousemen, truck drivers and counter hands in the dispensaries, and by the employees of Central Warehouse.

EFFICIENCY

HEAD OFFICE:—The various departments of Head Office, departments through which a record of every transaction in connection with the dispensaries passes, carried on their work in a most creditable and efficient manner. Head Office furnishes the Board of License Commissioners each month with a financial statement embracing balance sheet, profit and loss account, operating expenses, Central Warehouse stock account, and a schedule of insurance in force.

CENSOR'S DEPARTMENT:—This department has become a veritable storehouse of useful information and is constantly called upon for reports dealing with many phases of our work. It is from this department that all the records are obtained monthly with respect to the number of prescriptions and requisitions issued, and from the records in question the greater part of the information used in the prosecution of persons obtaining liquor from the dispensaries in an unlawful manner, is obtained. This department secured the signatures of all the physicians, dentists, druggists and veterinary surgeons in Ontario, and the signatures of the persons

entitled to sign the requisitions of the various hospitals in Ontario. This department has to keep in immediate touch with the governing bodies over the phyicians, dentists, druggists and veterinary surgeons, as new names are being constantly added to the various lists and names removed.

CENTRAL WAREHOUSE:—During the past year this department, with two warehouses in Toronto and one in Hamilton, handled 128,511 cases of liquor. The department receives all shipments from overseas, and a considerable quantity of the liquor ordered from the various Canadian distilleries and breweries, some of the shipments from the Canadian distilleries and breweries being made direct to the various dispensaries. Each individual case and bottle has to be accounted for in this department as well as in the various dispensaries.

Central Warehouse also looks after the stock of confiscated liquor which is forwarded from all portions of the Province, which in itself is a considerable task. Every case is opened, every bottle or container carefully examined and a record made. In addition a ledger is kept at Head Office devoted to Confiscated Stock.

Efficient management is always in evidence with respect to this department, which is very necessary, as it is the feeder, so to speak, for the dispensaries.

DISPENSARIES:—The managers and employees in general have given faithful service, and we believe the public appreciate the service given them.

I cannot close this report without expressing my warmest thanks for the valuable assistance rendered, not only to the dispensaries, but to myself, by Mr. J. D. Flavelle and Mr. W. S. Dingman. To Mr. W. B. Cleland I also owe much for advice freely given, especially during the first few months after my appointment as General Manager. With the auditors also I have had the most pleasant relations.

Respectfully yours,

ONTARIO GOVERNMENT DISPENSARIES,

A. H. Birmingham,
General Manager

TORONTO, 26th January, 1922.

JAMES HALES, ESQ.,
Chairman, Board of License Commissioners of Ontario,
25 Queen's Park, Toronto.

DEAR SIR,—We have audited the books and accounts of the Dispensaries, Central Office and Central Warehouse for the year ending 31st December, 1921, and have prepared the enclosed Balance Sheet and Schedules relative thereto, which, subject to the following remarks exhibit a true and correct view of the position of the undertaking on 31st December, 1921, and a correct statement of the earnings for the year.

We report in detail, as follows:

BALANCE SHEET

ASSETS.

Dominion Bank, Toronto, $203,330.46.
Dominion Bank, London, England, $815.12.

These amounts are in agreement with certificates from your bankers after allowing for outstanding cheques.

Cash on Hand, $2,200.00.

We counted the cash at Central Office on 31st December, 1921, and your Head Office officials counted the cash on the same date at the Dispensaries and certified that they were correct.

Stock of Liquors at Cost Price, $1,121,259.18.

Your General Manager has certified that the stock was taken under his direction and was priced at cost.

The inventories at the dispensaries were taken by the managers and one of the Central Office staff and at the Central warehouse by the chief stock accountant and the warehouseman and were checked with the Stock Ledgers kept at the Central Office and found to be in accordance therewith.

Attached hereto, Schedule 5, is a statement showing the stock on hand and furniture and fixtures at each dispensary and amount of fire and other insurance carried.

The confiscated stock on hand at Toronto, 31st December, 1921, amounting to $205,265.78 is not included in the assets as the dispensaries only handle the stock and keep the records on behalf of the Board of License Commissioners, purchasing from the Board such stock as they require from time to time.

The following insurance is carried:

Fire, $225,000.00.
Riot, $56,000.00.
Burglary, $2,000.00.

Accounts Receivable, $7,250.40.

We have carefully examined these accounts (See Schedule 8) which consist of sales to hospitals and other institutions, and druggists and manufacturers and any probable losses have been provided for.

Claims, Freight Claims,	$2,023.80	
Duty Recoverable	474.37	
Insurance "	441.57	
		$2,939.74

A reserve has been provided, which in our opinion is sufficient to cover any losses.

Insurance Recoverable represents the amount owing by the Insurance Company on claims for breakages and shortages and has since been paid.

Empties on Hand, $1,061.41

We have seen a certificate signed by the clerk in charge of the stock ledgers that there are sufficient beer cases on hand, valued at $1.00 each, to cover this amount.

Stationery and Supplies, $11,076.38.

The chief stock clerk certifies that stationery and supplies on hand priced at cost amounted to $11,076.38. A reserve has been provided for the whole amount.

Liabilities.

Accounts Payable, $10,596.41.

Your Accountant has certified that all known liabilities to 31st December, 1921, were included in the books at that date. The value of goods ordered but not received to 31st December, 1921, amounted to $203,253.16 as per Schedule 6 attached and your General Manager has certified that this total is correct.

Leases.

Schedule 7 gives a description of the various premises occupied by your Dispensaries, Central Office and Central Warehouse.

Reserve for Supplies and Contingencies, $15,637.20.

This includes a reserve for the total amount of the stationery and supplies and sufficient to provide for any losses in the collection of the claims and Accounts Receivable.

Surplus, $1,323,699.08.

This is the balance of profits made since the dispensaries were opened on 24th May, 1919, after paying $575,000 to the Provincial Treasurer and writing off the whole of the machinery, equipment and office furniture.

Details of the profits earned for the year ending 31st December, 1921, are shown in the attached Schedules 1, 2, and 3. We have to report on the principal items, as follows:

Profit and Loss Account—Schedule 1.

This schedule shows in detail the operations of the various dispensaries. The liquors are purchased through the Central Warehouse and are charged up to the various dispensaries at cost.

The gross profits resulting from sales amounted to	$ 1,150,513 75	36.56%
From this must be deducted the following:		
Discount on sales to chemists and doctors	$85,060 40	2.70%
Mail order shipping expense	78,725 65	2.50%
Operating expense including Central Office and Central Warehouse Expense	295,129 04	9.38%
	$ 458,915 09	14.58%
Leaving a net profit on operations of	$ 691,598 66	21.98%
	$ 1,150,513 75	36.56%

Your policy is to sell the liquors at the same price throughout the Province and to pay the expense of special packing and express charges. We have shown on the same Schedule the comparative statements of the total business done by each dispensary.

The percentage of gross profits earned by each dispensary were:

No. 1, Toronto	35.69 per cent. of sales
No. 2, Toronto	35.68 per cent. of sales
No. 3, Hamilton	36.88 per cent. of sales
No. 4, London	37.50 per cent. of sales
No. 5, Windsor	36.82 per cent. of sales
No. 6, Kingston	37.48 per cent. of sales
No. 7, Ottawa	36.71 per cent. of sales
No. 8, Ft. William	40.84 per cent. of sales

The differences are accounted for by the varying ratio of profits on the class of liquor sold.

All discounts and expenses of the mail order are included in one account which is spread in the same way as the expenses of the Central Warehouse and the Office expenses, viz., in proportion to the sales at all dispensaries. The operating expenses of some of the dispensaries show a higher percentage to sales than others.

Operating Expenses—Schedule No. 2.

This Schedule shows details of the various expenses together with the percentages that these expenses bear to the sales. The largest item consists of salaries etc., $188,121.97, being approximately 5.98% of the total sales of $3,146,444.59. It must, however, be borne in mind that the bulk of the sales are made in single bottles and record has to be kept of every bottle at the Central Office. Another heavy item is insurance. The amount written off for breakages is $1,232.99 or .04% of the sales. Under the present system of cost records it is the only item of stock which cannot be checked and should be subject to the closest supervision by the management. This item of expense is passed in the minutes of the Advisory Committee monthly.

Net Profit and Loss Account—Schedule No. 3.

This Schedule shows net profit earned for the period.

Yours faithfully,
Clarkson, Gordon & Dilworth.

ONTARIO GOVERNMENT DISPENSARIES.

CENTRAL WAREHOUSE STOCK FOR YEAR ENDING 31st DECEMBER, 1921.

DR.

Stock on Hand 1st January, 1921	$649,302 39
Purchases	1,282,408 75
Duty	990,091 34
Freight Inwards	70,275 82
	$2,992,078 30
Less, claims and breakages	12,919 37
	$2,979,158 93

CR.

Cost of Shipments to Dispensaries:		
Dispensary No. 1, Toronto	$771,394 98	
" 2, Toronto	198,265 64	
" 3, Hamilton	260,436 18	
" 4, London	254,194 62	
" 5, Windsor	119,046 93	
" 6, Kingston	161,468 84	
" 7, Ottawa	184,880 82	
" 8, Fort William	100,030 79	
	$2,049,718 80	
Less, transfers	8,356 42	
		$2,041,362 38
Cost of Sales to Hospitals and Manufacturers		77,108 75
Stock on Hand 31st December, 1921		860,687 80
		$2,979,158 93

EMBER, 19

Machiner	ries (Schedule	98 66
Net Profi		
		09 08
		3,126 03
		1,691 06
		$706,324 83
		10 06
	s of expectatio	9,978 84
	e	1,478 30
	ount	385 77
		$8,852 97
		$715,177 80

I

Cash in I		$10,596 41
Cash on I	ntingencies	15,637 20
	1921	3,634 40
Stock at		2,064 68
		3,699 08
Accounts		
Claims:		
Freig	surer	5,000 00
Duty		1,323,699 08
Insu		
Empties.		
Stationer	undelivered or	6,253 16
		$1,349,932 69

Toronto, d to in our repo

IDON & DILWORTH,
Chartered Accountants

ONTARIO GOVERNMENT DISPENSARIES.

NET PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31st DECEMBER, 1921

Machinery, equipment and furniture, balance written off		$13,113 12	Profit on operation of dispensaries (Schedule 1)		$691,598 66
Net Profit		702,064 68	Profit on Sales to Hospitals:		
			Sales	$51,413 15	
			Cost	46,504 07	
					4,909 08
			Profit on Sales of Alcohol:		
			Sales	$38,730 71	
			Cost	30,604 68	
					8,126 03
			Sale of Empties, scrap, etc.		1,691 06
					$706,324 83
			Sundry Receipts:		
			Cash Overages		10 06
			Claims collected in excess of expectations		6,978 84
			Interest on Bank Balance		1,478 30
			Profit on Boxmaking Account		385 77
					$8,852 97
		$715,177 80			$715,177 80

ONTARIO GOVERNMENT DISPENSARIES

BALANCE SHEET, 31st DECEMBER 1921.

Assets				Liabilities		
Cash in Dominion Bank, Toronto		$203,330 46		Accounts Payable		$10,596 41
" London, England		815 12		Reserve for Supplies and Contingencies		15,637 20
Cash on Hand		2,200 00	$206,345 58			
Stock at cost price (Schedule 5)			1,121,259 18	Surplus:		
Accounts Receivable		7,250 40		Balance at 1st January, 1921	$946,634 40	
Claims:				Profit for year	702,064 68	
Freight Claims	$ 2,023 80				$1,648,699 08	
Duty Recoverable	474 37			Less		
Insurance Recoverable	441 57			Paid to Provincial Treasurer	325,000 00	
		2,939 74				1,323,699 08
Empties	1,061 41					
Stationery and Supplies	11,076 38			Contingent liability for undelivered orders (Schedule 6)	203,253 16	
		12,137 79				
			22,327 93			
			$1,349,932 69			$1,349,932 69

Toronto, 26th January, 1922.

Referred to in our report of this date.

CLARKSON, GORDON & DILWORTH,
Chartered Accountants

ONTARIO GOVERNMENT DISPENSARIES.

OPERATING EXPENSES FOR YEAR ENDING 31st, DECEMBER 1921.

	Dispensary No. 1 Toronto		Dispensary No. 2 Toronto		Dispensary No. 3 Hamilton		Dispensary No. 4 London		Dispensary No. 5 Windsor		Dispensary No. 6 Kingston		Dispensary No. 7 Ottawa		Dispensary No. 8 Fort William		Chief Censor's Department	Central Warehouse	Central Office	Total	
	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Per-centage	Amount	Amount	Amount	Amount	Per-centage
	$ c		$ c		$ c		$ c		$ c		$ c		$ c		$ c		$ c	$ c	$ c	$ c	
Salaries	35,939 59	3.02	11,331 84	3.58	14,737 02	3.42	14,363 05	3.68	6,576 42	3.83	8,540 70	3.66	9,448 62	3.23	7,696 43	6.28	15,476 91	19,021 87	44,989 52	188,121 97	5.98
Executive Salaries																			8,899 84	8,899 84	.28
Rentals	1,600 00	.13	1,500 00	.48	1,675 00	.39	1,600 00	.41	1,127 50	.66	1,164 00	.50	1,965 00	.67	1,620 00	1 32	600 00	5,408 00	720 00	18,979 50	.60
Auditing																			4,000 00	4,000 00	.13
Travelling Expenses																			4,265 73	4,265 73	.14
Money Order Expense					1 82		3 33		1 61		.83		5 30		07				05	13 01	
Insurance	731 85	.06	1,012 68	.32	1,379 12	.32	1,807 04	.46	896 26	.52	1,612 61	.69	1,599 51	.55	1,758 10	1.44		16,398 37	1,032 32	28,227 86	.90
Postage	542 32	.05	22 00	.01	280 06	.06	315 00	.08	106 95	.06	215 45	.09	167 40	.06	132 08	.11	2,110 80		824 18	4,716 24	.15
Stationery	4,877 61	.41	456 40	.14	1,271 36	.29	1,259 36	.32	405 02	.24	835 23	.36	792 94	.27	710 64	.58	3,068 59	1,967 37	1,969 71	17.614 23	.56
Telephone	129 86	.01	69 11	.02	174 57	.04	87 96	.02	50 49	.03	61 95	.03	70 23	.02	44 15	.04	52 34	94 33	398 00	1,232 99	.04
Telegrams					88 89	.02	2 74		33		71		1 82		10 48	.01			203 65	308 62	.01
Breakage	210 42	.02	58 75	.02	127 04	.03	80 07	.02	44 43	.02	31 34	.01	52 72	.02	71 19	.06		563 08		1,239 04	.04
Bottling Expense																		1,437 29		1,437 29	.05
Claims Expense																			38 00	38 00	
Expense Supplies	308 92	.03	91 09	.03	231 99	.05	62 82	.02	69 35	.04	40 33	.02	69 42	.02	73 80	.06	388 33	195 83	497 75	2,029 63	.06
Light, Heat and Power	172 09	.01	285 82	.09	1,072 66	.25	43 99	.01	210 31	.12	45 72	.02	63 05	.02	219 98	.18	94 24	346 92	317 24	2,872 02	.09
Repairs and Maintenance	392 32	.03	282 92	.09	1,328 66	.32	160 34	.04	445 35	.26	159 73	.07	32 00	.01	1,271 30	1.04	79 25	1,207 47	479 20	5,838 54	.18
Sundries	438 66	.04	263 16	.08	1,459 09	.34	185 62	.05	118 24	.07	87 65	.04	565 07	.19	42 27	.03	154 85	1,197 90	782 02	5,294 53	.17
Proportion Chief Censor's Department	8,316 15	.70	2,213 21	.70	3,016 68	.70	2,734 40	.70	1,202 38	.70	1,632 38	.70	2,052 81	.70	857 30	.70	22,025 31				
Proportion Central Office Expenses	26,209 99	2.21	6,975 44	2.21	9,507 67	2.21	8,618 02	2.21	3,789 52	2.21	5,144 79	2.21	6,469 82	2.21	2,701 96	2.21			69,417 21		
Proportion Central Warehouse Expenses	18,062 46	1.52	4,807 05	1.52	6,552 15	1.52	5,939 06	1.52	2,611 53	1.52	3,545 49	1.52	4,458 65	1.52	1,862 04	1.52		47,838 43			
Total General Expenses	97,932 24	8.24	29,369 47	9.29	42,903 78	9.96	37,262 80	9.54	17,655 69	10.28	23,118 91	9.92	27.814 36	9.49	19,071 79	15.58				295,129 04	9.38
Total Cash Discounts	32,116 43	2.70	8,547 36	2.70	11,650 23	2.70	10,560 10	2.70	4,643 48	2.70	6,304 16	2.70	7,927 80	2.70	3,310 84	2.70				85,060 40	2.70
Prepaid Freight and Express	22,300 30	1.88	5,934 93	1.88	8,089 43	1.88	7,332 49	1.88	3,224 25	1.88	4,377 34	1.88	5,504 74	1.88	2,298 91	1.88				59,062 39	1.88
Cartage	361 50	.03	96 20	.03	131 13	.03	118 86	.03	52 27	.03	70. 96	.03	89 23	.03	37 26	.03				957 41	.03
Truck Maintenance	4,119 97	.35	1,096 47	.35	1,494 52	.35	1,354 67	.35	595 68	.35	808 71	.35	1,017 00	.35	424 71	.35				10,911 74	.35
Packing Materials	2,942 84	.24	783 20	.24	1,067 51	.24	967 63	.24	425 48	.24	577 65	.24	726 43	.24	303 37	.24				7,794 11	.24
Total Mail Order Expenses	29,724 61	2.50	7,910 80	2.50	10,782 59	2.50	9,773 65	2.50	4,297 68	2.50	5,834 66	2.50	7,337 40	2.50	3,064 26	2.50				78,725 65	2.50
Total Operating Expenses	159,773 28	13.44	45,827 63	14.49	65,336 60	15.16	57,596 55	14.74	26,596 85	15.48	35,257 73	15.12	43,079 56	14.69	25,446 89	20.78				458,915 09	14.58

SCHEDULE II.

ONTARIO GOVERNMENT DISPENSARIES

PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31st DECEMBER, 1921.

	Dispensary No. 1 Toronto		Dispensary No. 2 Toronto		Dispensary No. 3 Hamilton		Dispensary No. 4 London		Dispensary No. 5 Windsor		Dispensary No. 6 Kingston		Dispensary No. 7 Ottawa		Dispensary No. 8 Fort William		Total	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
Stock on hand, 1st January, 1921	$ c. 17,721 40	1.49	$ c. 21,060 79	6.66	$ c. 67,156 03	15.58	$ c. 33,022 42	8.45	$ c. 11,284 21	6.57	$ c. 21,793 83	9.35	$ c. 44,978 57	15.34	$ c.	.....	$ c. 217,017 25	6.90
Stock purchased from Central Warehouse	771,394 98	64.93	198,265 64	62.70	260,436 18	60.43	254,194 62	65.07	119,046 93	69.31	161,468 84	69.24	184,880 82	63.04	100,030 79	81.67	2,049,718 80	65.14
Returns to Stock	456 80	.04	.....	.....	89 35	.02	332 17	.09	53 63	.03	191 60	.08	101 44	.03	8 19	.01	1,233 18	.04
	789,573 18	66.46	219,326 43	69.36	327,681 56	76.03	287,549 21	73,61	130,384 77	75.91	183,454 27	78,67	229,960 83	78.41	100,038 98	81.68	2,267,969 23	72.08
Deduct:																		
Breakage Recoverable	5 25	.00	.....	.....	40 54	.01	1,373 78	.35	245 87	.14	390 69	.17	127 53	.04	116 53	.10	2,300 19	.07
Breakage, interior and irrecoverable	206 00	.02	75 18	.02	155 20	.03	109 75	.03	49 72	.03	31 34	.01	67 68	.02	115 53	.09	810 40	.03
Transfers of stock to Central Warehouse	574 69	.05	485 19	.15	3,485 16	.81	355 54	.09	165 02	.10	1,175 51	.50	602 81	.21	1,512 50	1.23	8,356 42	.26
Stock on hand, 31st December 1921	24,737 91	2.08	15,401 82	4.87	51,984 68	12.06	41,577 31	10.64	21,406 05	12.46	36,072 99	15.47	43,554 25	14.85	25,836 37	21.10	260,571 38	8.28
	25,523 85	2.15	15,962 19	5.04	55,665 58	12.91	43,416 38	11.11	21,866 66	12.73	37,670 53	16.15	44,352 27	15.12	27.580 93	22.52	272,038 39	8.64
Cost of Stock sold	764,049 33	64.31	203,364 24	64.32	272,015 98	63.12	244,132 83	62.50	108,518 11	63.18	145,783 74	62.52	185,608 56	63.29	72,458 05	59.16	1,995,930 84	63.44
Sales	1,188,009 36	100	316,173 05	100.	430,950 26	100.	390,625 38	100.00	171,765 71	100.	233,195 38	100.	293,255 06	100.	122,470 39	100.	3,146,444 59	100.
Gross profit on sales	423,960 03	35.69	112,808 81	35.68	158,934 28	36.88	146,492 55	37.50	63,247 60	36.82	87,411 64	37.48	107,646 50	36.71	50,012 34	40.84	1,150,513 75	36.56
Deduct:																		
Operating Expenses	97,932 24	8.25	29,369 47	9.29	42,903 78	9.96	37,262 80	9.54	17,655 69	10.28	23,118 91	9.92	27,814 36	9.49	19,071 79	15.58	295,129 04	9.38
Discounts	32,116 43	2.70	8.547 36	2.70	11,650 23	2.70	10,560 10	2.70	4,643 48	2.70	6,304 16	2.70	7.927 80	2.70	3,310 84	2.70	85,060 40	2.70
Mail Order expense	29,724 61	2.50	7,910 80	2.50	10,782 59	2.50	9.773 65	2.50	4,297 68	2.50	5,834 66	2.50	7.337 40	2.50	3,064 26	2.50	78,725 65	2.50
	159,773 28	13.45	45,827 63	14.49	65,336 60	15.16	57,596 55	14.74	26,596 85	15.48	35,257 73	15.12	43,079 56	14.69	25,446 89	20.78	458,915 09	14.58
Net Profit	264,186 75	22.24	66,981 18	21.19	93,597 68	21.72	88,896 00	22.76	36,650 75	21.34	52,153 91	22.36	64,566 94	22.02	24,565 45	20.06	691,598 66	21.98

COMPARATIVE STATEMENT OF PERCENTAGE OF SALES, ETC., ATTRIBUTABLE TO EACH DISPENSARY

Counter sales	864,820 87	36.20	316,173 05	13.20	356,965 16	14.90	232,728 93	9.70	152,041 38	6.40	135,335 25	5.70	237,696 98	9.90	94,904 56	4.00	2,390,666 18	100.00
Mail Order sales	323,188 49	42.80	.....	.....	73,985 10	9.80	157,896 45	20.90	19,724 33	2.60	97,860 13	12.90	55,558 08	7.40	27,565 83	3.60	755,778 41	100.00
Cost of stock sold	764,049 33	38.30	203,364 24	10.20	272,015 98	13.60	244,132 83	12.20	108,518 11	5.50	145,783 74	7.30	185,608 56	9.30	72,458 05	3.60	1,995,930 84	100.00
Gross profit	423,960 03	36.90	112,808 81	9.80	158,934 28	13.80	146,492 55	12.70	63,247 60	5.50	87,411 64	7.60	107,646 50	9.40	50,012 34	4.30	1,150,513 75	100.00
Operating expenses	97,932 24	33.20	29,369 47	10.00	42,903 78	14.50	37,262 80	12.60	17,655 69	6.00	23,118 91	7.80	27,814 36	9.40	19,071 79	6.50	295,129 04	100.00
Discounts	32,116 43	37.70	8.547 36	10.10	11,650 23	13.70	10,560 1	12.40	4,643 48	5.50	6.304 16	7.40	7,927 80	9.30	3,310 84	3.90	85,060 40	100.00
Mail Order shipping	29,724 61	37.80	7,910 80	10.00	10,782 59	13.70	9,773 65	12.40	4.297 68	5.50	5,834 66	7.40	7,337 40	9.30	3,064 26	3.90	78,725 65	100.00
Net profit	264,186 75	38.20	66,981 18	9.70	93,597 68	13.50	88,896 00	12.90	36,650 75	5.30	52,153 91	7.50	64,566 94	9.30	24,565 45	3.60	691,598 66	100.00